DOCUMENT RESUME

ED 162 451 EC 112 418

AUTHOR	Clark, Thomas C.; Watkins, Susan
TITLE	The SKI*HI Model: A Comprehensive Model for Identification, Language Facilitation, and Family Support for Hearing Handicapped Children Through Home Management, Ages Birth to Six. Third Edition.
INSTITUTION	Utah State Univ., Logan. Coll. of Education.
SPONS AGENCY	Bureau of Education for the Handicapped (DHEW/OE), Washington, D.C.
PUB DATE	Jul 78
NOTE	386p.
EDRS PRICE	MF-$0.83 HC-$20.75 Plus Postage.
DESCRIPTORS	Ancillary Services; Auditory Training; *Aurally Handicapped; Conceptual Schemes; Curriculum; Hearing Aids; *Home Programs; Home Visits; Identification; Infancy; Intervention; *Language Instruction; Models; Parent Role; Program Administration; *Program Descriptions; Total Communication
IDENTIFIERS	*SKI HI Program

ABSTRACT

The SKI HI program, a home intervention model for hearing impaired infants and their families, is described. An overview of the program is provided, followed by separate sections on administrative, direct service, and support service topics (sample subtopics in parentheses): child identification and processing (statewide hearing screening model, child assessment procedures); program management (personnel, program evaluation); home visit procedures; home intervention curriculum home hearing and program, auditory program, total communication, home language programs); and supportive services (audiological, hearing aid, psychological services and parent groups). (CL)

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THE SKI*HI MODEL

A COMPREHENSIVE MODEL FOR IDENTIFICATION, LANGUAGE FACILITATION, AND FAMILY SUPPORT FOR HEARING HANDICAPPED CHILDREN THROUGH HOME MANAGEMENT, AGES BIRTH TO SIX

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Funded by - U.S. Office of Education, Bureau of the Handicapped, Handicapped Children's Early Education Program, P.L. 91-230, Title IV, Part C

Third Edition - July 1978

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ACKNOWLEDGMENTS

The editors would like to acknowledge project staff, consultants and others who have contributed to the development of Project SKI*HI and this manual.

Consultants

Winifred Northcott, Ed.D., Minnesota State Department; Kathrine Horton, M.S., Bill Wilkerson Speech and Hearing Center, Nashville; Marion Downs, M.S., University of Colorado; Doreen Pollack, M.S., Porter Memorial Hospital, Denver; Thomas Longhurst, Ph.D., Kansas State University, Manhattan; William Frankenburge, M.D., University of Colorado Medical School, TADS Consultant; Dr. Susanna Baltzer, Gallaudet College; Doris P. Bradley, Ph.D., TADS Consultant; Pat Tesauro, Project Parent-Child, University of Denver; Ruth Williams, M.S., Child Growth and Development, Weber State College; Rex Scott, M.S., Audiologist; Geary McCandless, Ph.D., Audiologist, University of Utah; Richard Taylor, Ph.D., Audiologist, Utah State University; Steven Viehweg, Ph.D., Audiologist, Utah State University, Kenneth Jones, Ph.D., Audiologist, Brigham Young University; Staff of Technical Assistance Development System, Chapel Hill, North Carolina; Ross Weaver, Ph.D., Audiologist, Brigham Young University, Provo; Nicholas Anastasiow, Indiana University.

Staff

Beyond those who were major contributors, as noted on the title page, were other staff members who contributed to the development of the project and the manual. These are: Mrs. Jo Ann Goodrich, Mrs. Evelyn McNair, Mrs. Phyllis Snow, Mrs. Beverly Bateman, Mrs. Ruth Leigh, Mrs. Ruth Williams, Mrs. Denise Whelan, Mrs. Peggi Baker and Mrs. Karen Brown. All of these staff members contributed substantially as Parent Advisors. The media specialists Shannon Madsen and Bill Cottle gave important contributions. Of course you can't develop a project nor write a manual without secretaries. Special thanks to Julie Palmer, LuAnn Russell, Marily Nanney, Jane Haueter, JoLyn Winward, Ann Black, Bessie Kidman and Laurie Rose.

Special acknowledgment is given to Ms. Jane DeWeerd, Bureau of Education of the Handicapped, Project Development Branch, who is the Bureau Project Officer. Her time, interest and special visit to the project have been valuable.

Utah State Health, Speech Pathology-Audiology section has given great assistance and has made major contributions to the success of the project. This agency has developed a state wide screening program, has done much of the testing of children in the project and has provided hearing aids for many project children. Their contribution has had a major impact on the project. Special thanks is given to Mr. Nick Cozakas and Dr. Thomas Mahoney. A very special acknowledgment is given to the late Dr. Aaron Roylance who gave special support and inspiration in the early development of the project.

The administration and staff of the Utah School for the Deaf has given outstanding support and administrative guidance. Special acknowledgment is given to Mr. Tony Christopulos, Principal, Mr. Robert Tegeder, Superintendent and Dr. Melvin Nielson.

TABLE OF CONTENTS

INTRODUCTION: THE SKI*HI MODEL 1

ADMINISTRATION

Child Identification and Processing
A Statewide Hearing Screening Model . . . 10

Newborn Hearing Screening Questionnaire . . 21
Hearing Alert 23
Telephone Questionnaire 25

Public Awareness 26
Referral System 27
The Entry Process: Psychological-Emotional Support for Parents of Hearing Impaired Infants During the Service Entry Period 30
Child Assessment 44

Child Progress 46
Communication Assessment 47
Assessment for Exit from Program . . . 50
Process for "Graduation" of a Child and Family from Project SKI*HI . . 51
Criteria for "Graduation" of a Child and Family from Program 52
Evaluation of Child for "Graduation" from Project SKI*HI 54

Family Orientation 55

Report of Family Orientation 57

Child Staffing 58

Child Staffing Sheet 59
Parent Advisor Data Report for Child Staffings 60

Program Management

Personnel: Description, Management and Selection . 61

A Flow Chart Depicting Administrative Flow . 64

A model for Delivery of Services 65
Inservice Training 68
Interagency Cooperation 70
Supervision 71

TABLE OF CONTENTS (Continued)

Program Evaluation 73
SKI*HI Outreach 83

DIRECT SERVICES TO FAMILIES

Home Visit Procedures

Planning the Home Visit 88
Utah School for the Deaf Home Visit Report 89
Format for a Home Visit 91
Child Assessment in the Home and Reporting 93
Parent Advisor Home Hearing and Evaluation Form . . . 96
Weekly Home Visit Report . . . 97
Monthly Parent Advisor Evaluation Form 98
Instructions for Monthly Report . 105
Parent's Notebook 111
Home Hearing Aid Evaluation for Parents 116
Record Hearing Aid Worn . . . 117
Hearing Aid Evaluation Form . . 118
Language Development . . . 119
Hearing Aid and Auditory Skills . 120
Developmental Growth . . . 122
Child's Experience Book . . 154

Home Intervention Curriculum

Home Hearing Aid Program 157
Introduction 157
Goals of the Home Hearing Aid Program . . 159
Communication Preassessment and Discussion Conducted During the Home Hearing Aid Program 159
Lesson 1 160
Lesson 2 165
Lesson 3 170
Lesson 4 176
Lesson 5 183
Lesson 6 188
Lesson 7 194
Maintaining Children's Hearing Aids: The Role of the Parents - Downs . 195

TABLE OF CONTENTS (Continued)

Lesson 8 201
Lesson 9 203

Home Auditory Program 204

Introduction 204
Section I: Overview of Auditory Program . 205

Communication Skills to be Incorporated in the Auditory Program . . . 208
Criteria for Moving to a Higher Auditory Level 209
Auditory Clues 209

Section II: Teaching the Auditory Program In the Home 210

Steps in Teaching Auditory Skills . . 210
Reflexive Level 211
Alerting Level 212
Locating Sound Sources 214
Distance Hearing 215
Levels of Hearing 216
Gross Environmental Discrimination . . 218
Gross Vocal Discrimination . . . 220
Fine Speech Discrimination . . . 226
Auditory Activities 231

Total Communication 251

Evaluation for Total Communication . . . 251
Video Cassette Tape Program Rationale . . 252
Description of the Video Cassette Program . 253
Use of the Tapes in the Home Visit. . . 256

Communication Program 259

Rationale 259
Description 259
Diagram: Communication Program in the SKI*HI Model 261
Communication Skills 262

I. Establishing an Effective Communication Environment 262
II. Establishing Contact with the Child 264
III. Communicating Effectively with the Child 266

Non-Verbal Communication Checklist 275
Verbal Communication Checklist . . . 276
Interaction Analysis Form A 277
Interaction Analysis Form B 278

Home Language Program 279

Parent Dialogue 279
Four Language Areas 281
Selection of Target Vocabulary and Phrases . 283
Frequency of Input 285
Expansion 287
Naturalness 289
Being Responsive to Language in the Home . 291

SKI*HI Language Development Scale 297

Age Intervals for Language Development Units . 320

SUPPORTIVE SERVICES

Audiological Services 329

Diagnostic Audiology - the SKI*HI Way . . 329
Auditory Response Data Chart 333

Hearing Aid Services 334

Background and Introduction 334
Hearing Aid Bank 335
Hearing Aid Loaner System 337
Home Hearing Aid Evaluation Program . . 337
Procedures 338
Binaural Amplification Philosophy . . . 339
Hearing Aid Analysis 343
Hearing Aid Molds 343
Forms for Hearing Aid Evaluation . . . 343

Materials and Equipment for Parents and Child . 345

Hearing Aid Molds 345
Loaner Hearing Aids 346
Video Cassette Playback and Total Communication Tapes 346
Parent Resource Library 347
Parent Form for Loaner Hearing Aids . . 349

TABLE OF CONTENTS (Continued)

Psychological Support Services 350

Psychological Role and Training of Parent Advisors 350
Psychological Climate 354
Psychological Model 355
Role of Psychologist 357
Child Staffing 357
Professional Counseling 358

Parent Groups 359

Self Rating Sheet 360
Parents Scale of Workshop Presentations . . 361
SKI*HI Group Counseling Scale 362

Child Development 364

INTRODUCTION

The SKI*HI Model

Home Intervention Programming
For Infant Hearing Impaired Children
and Their Families

The Rationale for Early Home Intervention with Hearing Impaired Children

Hearing loss has a dramatic effect on language development and language usage. The National Demographic Studies of the Deaf (Gentile, 1971) report the academic progress of over 10,000 deaf children throughout the United States. These studies show that the average deaf child progresses at the rate of one month per year in reading and language. Thus the average deaf child falls behind nine months each academic year.

Several authors have described the effects that language deprivation has on the acquisition of receptive and expressive verbal language. Ewing (1963) reports on a comparison of the receptive and expressive language development of young deaf children, using the Watson-Pickles Scale, with the development of normal children, using the Gessel Language Development Scale. The study shows the 10 best deaf children to be retarded from five to 33 months in receptive language development during the second to fifth years of life and from four to 27 months retarded in expressive language development during the same time period. Northcott (1966) discusses the effect language deprivation has on speech development. She states that the hearing impaired child, after reaching the stage of random vocalizations, becomes silent since he has no language to imitate. The subsequent stages of speech development are then delayed or do not naturally develop at all. Tervoort as cited by Simmons (1967, p. 3) comments on the expressive language development of language deprived children:

> If the deaf child is left by himself there is no adaption to the world around of the speech sounds, and therefore, no extensive training of all possible phoneme combinations prior to their symbolic usage as words. Consequently, there is no single word phase, no morphological and syntactical refinement; in short: no language learning.

Because of the profound language delay and disorder caused by hearing loss and the apparent ineffectiveness of later school experiences in developing language in deaf children, many professionals have looked at the area of early intervention. The idea of a critical period for language development also places great emphasis on very early intervention.

There is evidence in the literature that there is a critical period for language acquisition in the life of every child. It is during the first few years of a child's life that language appears so rapidly and effortlessly. Researchers have addressed their research to this critical period and some have indicated the actual ages of the child during this time.

McNeill (1966, p. 120) states:

> The fundamental problem to which we address ourselves in language acquisition by normal children is the simple fact that the process occurs in a surprisingly short period of time. Grammatical speech does not begin before 1.5 years of age; yet as far as we can tell, acquisition is virtually complete by 3.5 or 4 years. Thus a basis for the rich and intricate competence of adult grammar . . . must emerge in the short span of 24 to 30 months.

That language is acquired during the first few years of life is supported by Lenneberg (1967). He terms this stage of development as "behavioral resonance" and defines it as the time when a child, after being exposed to the language of his social surroundings, suddenly responds to the stimuli and vocalizes in meaningful ways. The process is confined to the years just preceding the physical maturity of the brain when the nervous system is plastic and the cognitive processes are unfolding. "An individual may outgrow the capacity for the acquisition of language," reports Lenneberg (Lenneberg, 1967, p. 1337). Levine (1960) and Meadow (1968) believe that if language is not developed during the early years of a child's life, little more than remedial work can be done since language will never develop spontaneously. McCroskey (1967), Simmons (1967), and Downs (1967) maintain that the capacity for language acquisition occurs only once in the early years of life.

Several writers stress the importance of early intervention with hearing impaired infants because of this optimal or critical language development period. Streng (1967, p. 128) feels that the capacity to acquire language may be transitory, and reach a peak around the ages two to four. She states:

> If this is true, it leaves us in a rather hopeless situation unless language learning is seriously begun in the home before the age of two . . . the greater the delay in learning to communicate, the greater the delay in the more formal aspects of education and the more difficult is the task for both teacher and child.

Young (1976, p. 71) expressed the viewpoint that readiness periods for development of listening skills and oral language are largely confined to the first two years of life. He feels that later identification, beyond one year, results in stimulus deprivation that leads to central nervous system processing problems that cannot often be significantly improved by intensive teaching or use of hearing aids. "The poor language outcome of so many educationally deaf children resides in late identification rather than lack of, or poor teaching methods."

Bricker and Bricker (1974, p. 432) write that

> The infant and prelinguistic child are not simply sitting around listening to well formed sentences. They are exploring their environment and synthesizing a sensorimotor account of it all. Consequently, an early intervention program in language should begin during early infancy rather than in the middle of the second year of life.

Berg (1976, p. 90) refers to the 1971 Simmons study which suggested why special assistance should be provided to hearing-impaired children from infancy. She noted that it is during the first years of life that language learning ordinarily advances rapidly. She also indicated that language is inextricably linked with auditory experiences. Simmons concluded that delayed identification of hearing loss and delayed utilization of residual hearing prolong the time it takes a child to progress through the various stages of language development.

McCroskey (1967) supports an early language training program for hearing impaired infants because: (1) Humans have a predisposition to language, (2) early sensory input provides the material necessary for the infant to internally organize language; (3) the child learns how to monitor and control his language if he is given early feedback; and (4) the social, emotional, and intellectual growth of the child are proportional to the child's ability to relate to others and therefore are contingent on early language training.

An area of critical need that can best be met by early intervention is the need of parents of handicapped children for services and for psychological and emotional support.

The first reaction to finding that a child has a handicapping problem is generally distress. Ehlers (1966) found that the mothers of retarded children typically reported being shocked and disblieving when their child's condition was first confirmed.

The very identification or labeling of a person in the role of parent of a handicapped child nearly always comes as an unpleasant surprise. The expected perfect child, as pointed out by Schlesinger and Meadow (1972) is an anticipated gift to the family. If the child fails to be perfect, conflicts arise even in the best adjusted parents. The very presence of a handicap means that the parents' hopes and dreams have not been fully realized (Newby, 1964).

Even the birth of a normal child is a potential life crisis. The life style of family members is almost always changed creating a readjustment of roles within the family. The child to be is usually idealized as one who will meet or surpass his parents' achievements. He is generally perceived as giving pleasure (Schlesinger and Meadow, 1976). They contend that if the child is not perfect, latent conflicts are revived for his parents (Schlesinger and Meadow, 1976, p. 36).

> During the process of suspecting, recognizing, and identifying a handicap, it would appear that the following emotions are common among parents: shock, bewilderment, sorrow, guilt and anxiety.

Klaus and Kennell (1976) describe the stages that parents go through in reaction to having a handicapped child. The stages they gave are (1) shock, (2) disbelief (denial), (3) sadness, anger and anxiety, (4) equilibrium and (5) reorganization. The amount of time that a parent needs to deal with the issues of a specific stage varies but the sequence reflects the natural course of most parental reactions to their malformed infant.

Optimally, educational intervention will occur early in the life span of the exceptional child. Professionals should meet the parents shortly after the disclosure of the diagnosis (Schlesinger and Meadow, 1976). They state that the professional may be ready and eager to initiate education or therapy while the parent is still dealing with the impact of the diagnosis and his contact with the experts.

Klaus and Kennell, (1976, p. 117) say that:

> Involving the parents in the care and planning for their infant allows them to enjoy satisfying feedback from him. It is also at this early stage that the groundwork is laid for an effective alliance of parents and professionals concerning treatment.

They continue with:

> . . . a physician who knows about the disorganization which parents experience during the stages of shock and denial will realize that information about the child's condition and progress may have to be repeated many times.
>
> It is important to add that to talk with angry or depressed parents is not the natural inclination of the obstetrician, pediatrician, or nurse. The gratifications of these professions lie in either the delivery and care of the healthy infant or in the use of their medical knowledge to heal or remedy.

Lilly (1976) states that one of the objectives of social and emotional support programs for parents is to increase the parents' feelings of their own importance as worthwhile human beings. He explains that once identified, social and emotional needs of parents can be met in different ways including parent group meetings.

Enzer in Lilly (1976) states that it is essential that a true alliance be created between the parents and the professional. He says that fundamental to such a relationship is mutual respect, honesty and "an egalitarian attitude on the parts of both workers and parents."

The rationale for early home intervention is a strong one. The handicap of deafness imposes acute to profound language delay. These disorders have not responded well to later educational programming. From the body of early language development research and writing there is a convincing theory that there exists an optimal if not a critical period for language development, i.e., from birth to five years of age. Language intervention for hearing impaired children, therefore, must begin as soon after birth as possible. It should occur in the home setting with parent and family involvement. Early home intervention can provide the psychological and emotional support that parents of a handicapped child need.

The philosophy and thus the home program for hearing impaired infants and children are therefore built on the following concepts: (1) language programming and intervention for the hearing impaired child must begin as close to birth as possible. (2) The hearing disorder must be treated immediately. This treatment is in the form of amplification. Medical treatment is given where applicable. If the child with a hearing disorder does not respond to the treatment of amplification, then the communicative disorder is treated through an added visual system, total communication. (3) The language program should follow the sequence of the natural language universals. (4) The language program must be in the home and the parents are the target population which will execute the language program and bring about the language growth of the child. (5) The teacher's (parent advisor's) role is to teach the parent through modeling and instruction. (6) A child with a hearing disorder must be taught to use and develop his residual hearing. (7) A language development program for a hearing impaired infant or child should not be structured. (8) A home program should provide psychological and emotional support for parents of handicapped children.

Development of the SKI*HI Model

The home program for hearing impaired children was developed over an intensive six-year developmental program:

a. Staff members visited infant and young hearing impaired programs throughout the United States.
b. Consultants visited the project and gave input.
c. Extensive research on programs and language curriculum was made.
d. Extensive research and consulting input were given to natural language development.
e. An experimental model was developed and used for one and a half years.
f. After evaluation of the experimental model the parent advisors who had used the model and kept notes and data on its effectiveness met in workshops to refine and develope the current model.
g. The model was further refined by input from thirteen replication sites.
h. Extensive evaluation of child and parent progress was made and input given for program development and change.

Description of the SKI*HI Model

The model has three main components. These components are administrative, direct services to families and supportive services. Each of these components has several subcomponents. The enclosed figure visually displays the major components and subcomponents. This manual is the description of the SKI*HI model and is organized according to the major components and their subcomponents.

THE SKI*HI MODEL

Home Programming for Families of Hearing Impaired Infants

MAJOR COMPONENTS
(with Subcomponents)

ADMINISTRATIVE COMPONENT

Child Identification & Processing								Program Management						
Screening	Public Awareness	Referral System	Case Processing Entry	Diagnosis	Child Assessment	Family Orientation	Child Staffing	Selection of Personnel	Model for Delivery of Service	Inservice Training	Inter-Agency Cooperation	Supervision	Budget	Program Evaluation

DIRECT SERVICES TO FAMILIES

Home Visit Procedures				Home Intervention Curriculum					Parent Support	
Planning	Format for Visit	Reporting	Assessment in the Home	Home Hearing Aid Program	Home Auditory Program	Home Communication	TOTAL COMMUNICATION Program	Home Language Program	Child Development Assistance	Psychological & Emotional Support

SUPPORTIVE SERVICES

Audiological Services	Hearing Aid Services	Materials & Equipment for Parents	Psychological Support Services	Parent Groups	Child Development

A STATE-WIDE HEARING SCREENING MODEL

Rationale

All hearing impaired children deserve the opportunity to acquire the best language skills possible for them. The ultimate language abilities of the hearing impaired are dependent on the age at which the hearing impairment is identified. The most critical period for language development is during the first two years of life. It had been erroneously assumed that language could be introduced to the hearing impaired child at the age of three or four with successful results. A language development program (whatever the communication method may be) must begin in the first year of life. Therefore, early detection is of utmost importance.

The Utah State Division of Health, Speech Pathology, Audiology Section, and Project SKI*HI, in realizing the importance of early detection, developed a high-risk register screening model. The high-risk model of screening was selected because:

1. 75-90% of all children who eventually suffer hearing impairment would be listed on a high-risk register of newborns (Downs, 1972).

2. The population of mothers of newborns (who fill in the high-risk forms) is easily accessible in the hospitals and personnel to distribute the high-risk forms (nurses) are available.

3. There is an extremely low incidence of deafness in newborns (about one out of every 2,000 according to the U.S. Department of HEW, 1963). In recent studies on comprehensive hospital screening,* only .02% of the infants failed the screening.

---

*Comprehensive hospital screening will be the term used to describe the presentation of sound stimuli (3,000 Hertz at 90 dB, wide band noise at 100 dB) from an Apriton screening device or other screening device, near the newborn's head. The examiner then looks for the infant's response to the sound.

Money for screening instrumentation and personnel time for administering comprehensive screening tests must be considered in light of this low yield.

4. In comprehensive hospital screening, other problems arise: (a) It is difficult to catch the infant in an optimal state for testing. (b) Because false positives and false negatives are prevalent, the validity and reliability of this method of screening is questioned (false positives cause anxiety in parents and false negatives lead to unfounded security). (c) Conditions which may affect the auditory system (anoxic brain damage, hyperbilirubinemia) may not show their effect during the first few days of life but would be picked up on a high-risk register (Downs, 1972).

5. Agencies exist (State Department of Health, etc.) that can handle follow-up of the high-risk register forms.

Historical Development of the Screening Model

In 1966, Utah State Health officials developed a proposal for an infant hearing screening program in Utah. This proposal was revised several times after consultation with leading authorities in infant screening (Downs, Bondurant, Harrington, McCandless, Michal, Thompson and others). In 1967 comprehensive hospital screening (presentation of acoustic signals and observation of the child's responses) was initiated in the Logan LDS Hospital. In 1967 to 1973, comprehensive hospital screening was conducted in six hospitals of the state. A high risk form completed by the physician accompanied the comprehensive hospital screening. These physician forms proved too long and cumbersome and were not accepted by the hospitals. In 1971 the Joint Committee on Infant Hearing Screening made a statement urging further investigation of screening methods but discouraged routine hearing screening. This committee urged the application of high-risk data in detecting hearing impairments and set up guidelines for high-risk criteria. In 1972, comprehensive hospital screening was discontinued in favor of a high-risk form only.

In 1972, Marion Downs visited with Utah State Health and Project SKI*HI personnel. She made several suggestions which were incorporated into the high-risk form. For several years, this high-risk form was used in several Utah hospitals. Children determined high-risk according to the maternal questionnaire received follow-up telephone screening, at the age of 3-6 months. Parents of children still suspect after the telephone screening received a home hearing testing pamphlet (developed by Stanford Research Institute) which contained instruction on assembling simple noisemakers, and presenting the sound stimuli. The noisemakers were calibrated to specify frequency and intensity characteristics. A reliability study on this home screening pamphlet was conducted in 1974. In general, the reliability between parent administration and audiologist administration was poor. Many of the parents disregarded the timing instructions for stimulus presentations and quiet intervals. There was a large percentage of false positives when the parents performed the tests because many parents were looking for a localization response, even in very young infants. This was probably due to the fact that the localization response was the only response pictured in the pamphlet. The parents would often attenuate the signal by placing their fingers down over the noisemaker. Since most of the problems incurred were due to the instruction pamphlet, it was decided that revisions and further testing of the pamphlet should be done.

Between 1973-1976 further revisions of the high risk screening form were made with input from Utah's screening program plus other Stanford Research Institute sub-contractors (San Diego Speech and Hearing Center, San Francisco Speech and Hearing Center, University of Montana Speech and Hearing Center). The high risk form revised in 1976 is currently being used in several states.

Screening Procedures

Each mother of a newborn baby is asked to fill out a questionnaire regarding factors related to hearing loss (see page 21). This is done at the hospital before the mother leaves for home. Each mother also receives parent education materials such as "Hearing Alert" printed by permission from Alexander Graham Bell Association (see page 23).

This parent education material enables parents of children not at risk to note auditory behaviors, and if there is concern, contact the local agency printed on the pamphlet.

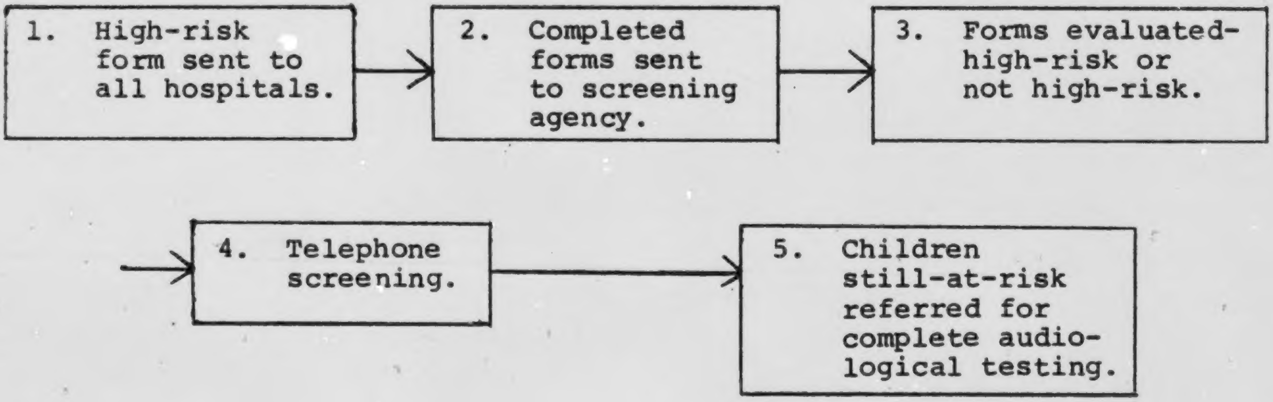
The hospital high-risk form is sent by the hospital to the screening agency (often the State Department of Health), where, under audiological supervision, forms are separated according to positive or negative answers. For example, if the mother indicates on the form that there is a history of hearing loss in the family or if she was exposed to rubella during pregnancy, the baby is considered high risk.

Any form with a positive answer makes up the high-risk register for potential hearing problems.

Each parent on the high-risk register is contacted by telephone when the child reaches three to six months of age. This phone call serves two purposes: (1) It is used to obtain more information on the high-risk problem. This eliminates false positive answers due to questions being misread. For example, a mother may indicate that one of her parents has a hearing loss, but if the hearing loss has not existed since childhood, it is probably not hereditary. The child is then removed from the high-risk register. (2) Parents are asked about their child's hearing. The parents' responses to these questions are recorded on a form. (See page 25)

If the child is still at risk following the telephone screening, audiological evaluations and/or medical consultations are scheduled or additional parent education material is sent to the concerned family. Subsequently, the child is referred to a parent-infant program for home care habilitative measures.

Screening Model Summary


1. High-risk form sent to all hospitals.
2. Completed forms sent to screening agency.
3. Forms evaluated-high-risk or not high-risk.
4. Telephone screening.
5. Children still-at-risk referred for complete audiological testing.

Results from Screening Programs:

The Utah State Division of Health, Speech Pathology/Audiology Section, issues quarterly reports on their high-risk screening program. During a typical reporting period in 1976, 9,000 babies were born in Utah. High-risk questionnaires were returned to the Utah State Health Department on 62% of these infants (5,580 infants). Seventeen percent of these infants (or 949 infants) were high-risk and received telephone follow-up. Out of these: 3% (28 infants) remained at risk, and received audiological or medical evaluations. Ten percent of these 28 infants (or three infants) had confirmed sensorineural or conductive hearing problems. If the 1/2000 incidence figure for congenital hearing loss is used, 4.5 children should be identified every three months in Utah.

If all of the hospital high-risk forms were returned to the Utah State Health Department instead of 62%, the large majority of hearing impaired children could be identified.

The data from other states replicating the Utah model is similar. For example, in Oklahoma City, 992 forms were received from four hospitals in a six month period in 1977. Sixteen percent of these (155 infants) were high-risk. After the telephone screening, eight infants (5%) were referred for audiological testing and one of these infants was diagnosed as having a severe sensorineural hearing loss.

An interesting spin-off of the screening program has been the number of siblings of high-risk infants who have been identified as being hearing impaired. In the first six months of 1976 in Utah, 1,626 infants were considered high-risk after their mothers filled in the hospital questionnaire. When the telephone screening was conducted, it was determined that 50 siblings of these infants were suspect for significant hearing loss. Twenty percent of this group were diagnosed as having either middle ear pathologies or sensorineural hearing losses.

Problems with High Risk Screening:

Although many hearing impaired infants are being identified, the various states participating in high-risk screening report four major problems:

1. Difficulty getting maternal questionnaire back from the hospitals.
2. Unidentified children due to unknown etiologies.
3. Intensive-care babies.
4. High false positives on the maternal questionnaires.

1. Low Maternal Questionnaire Return

Utah has experienced difficulty getting the maternal questionnaire back from the hospitals. The number of forms returned in Utah has varied from 50-70%. In attempting resolution of this problem, a question concerning family history of hearing loss was included in all Utah birth certificates in January of 1978. Since about 70% of all high-risk children are high-risk because of family history of hearing loss, this will greatly improve Utah's access to high-risk information on all infants.

Measures are currently being taken to include all high-risk information on the birth certificate and discontinue the use of the high-risk form.

Other states have tried some things that keep their return rates above 90%:

(a) The appointment of one person per hospital (nurse, etc.) to be in charge of the screening program. If one person has responsibility for seeing that the forms are distributed, collected, and returned to the screening agency, high return rates are possible.

(b) Periodic telephone contact (every 3-6 months) by the screening agency with participating hospitals. This personal encouragement and interest in each hospital's screening program is helpful. Also, hospital personnel should receive periodic reports on screening results so they feel the efforts are worthwhile.

2. Unidentified Children Due to Unknown Etiology

About 20-30% of all hearing impaired children have hearing losses of unknown etiologies (Northern and Downs, 1974). These children cannot be identified on a high-risk register. In an attempt to find these children, several mass screening procedures have been used such as comprehensive behavioral screening (Mencher, 1972; Stewart, 1977). In reviewing data from programs that have incorporated both comprehensive behavioral screening and a high-risk register, the large majority of children (80-85%) have been identified by the register. In Stewart's study of 3,681 newborns, twelve were found to be hearing impaired. Ten of the twelve children were on the high-risk register. Six of the twelve children failed the comprehensive behavioral screening. Only one child failed the behavioral screening who was not on the high-risk register. Although behavioral screening may identify children of unknown etiology, problems inherent in comprehensive behavioral screening should be considered such as cost benefit factors, training of personnel, finding newborns at an optimal state for testing (light sleep), and not detecting syndrome-related hearing losses that appear later in the infant's life (Downs, 1977).

3. Intensive Care Babies

The incidence of hearing loss among I.C.U. babies is considerably higher than in the general population. Simmons (1977) reports that the general incidence of severe hearing loss among the 9,429 infants that he screened to be 2.5/1000 compared with 14/1000 for I.C.U. populations. However, populations of I.C.U. babies are frequently lost to the high-risk register. In addition, it may seem insensitive to require parents of infants whose lives are in danger to fill in a hearing questionnaire.

Utah has made provisions for mothers of I.C.U. babies to participate in children and youth diagnostic clinics, when the child is about six months of age. Mothers of I.C.U. babies who do not participate in these clinics receive contact from the

State Department of Health about the child's medical and audiological status.

In other states, all I.C.U. babies are tested (EEG) in the hospitals or are routinely followed up at 3-6 months with a telephone screening or audiological evaluations.

4. High False Positives on Maternal Questionnaire

In Utah and states participating in SKI*HI Outreach, between 15 and 18% of all returned maternal questionnaires are found to be "high-risk." In a state the size of Utah, that means 6,120 phone calls are made per year to parents of high-risk children. In an effort to cut down on the number of false positives and "tighten" the maternal questionnaire, various states keep careful record of high-risk factors contributing to high-risk infants. We are also looking carefully at the etiologies of all identified hearing impaired children in Utah and other replicating sites to determine if high-yield questions (common etiologies) are being asked on the high-risk form. Hopefully, these measures will reduce the number of false positives.

It should be noted that the high false positive rate is relatively easy to handle as far as telephone follow-up is concerned. In a state the size of Utah with 36,000 live births/-year, about 25 phone calls per day would be necessary if all maternal questionnaires were returned. This could easily be done by a person working half a day, five days a week. The cost to the state would be minimal compared with the cost of rehabilitating unidentified children. Mencher (1977) indicates that each year of earlier detection saves $10,000 per child per year.

Summary:

Early identification of hearing impaired infants is essential if appropriate habilitative measures are to be taken. Successful high-risk register screening programs have been conducted in Utah by the State Division of Health and other states assisted by SKI*HI Outreach. The high-risk register is given to mothers of all newborns. Mothers also receive parent education materials such as the Alexander Graham Bell pamphlet "Hearing Alert." Maternal questionnaires are returned to an agency for determination of high-risk infants. These infants are followed up at 3-6 months by a telephone screening. Infants still suspect for a hearing loss are then referred for audiological testing.

Since the incidence of hearing impairment is much greater in I.C.U. populations than general newborn populations, follow-up of all I.C.U. babies is necessary.

Public relations campaigns to inform the citizenry of early detection and hearing health care are also very important.

Sources:

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NEWBORN HEARING SCREENING QUESTIONNAIRE

Please PRINT

Baby's Name ______________ Birthdate ______________ Sex ______________

Parent's Name ______________ Home Phone ______________ Date ______________

Address ______________ City ______________ Zip ______________

Hospital ______________ Baby's Doctor ______________

Dear Parent: Please fill out this information by circling YES or NO. ANSWER ALL QUESTIONS. If you need assistance, please contact the hospital nurse.

1. Has a close relative of the baby had a hearing loss SINCE CHILDHOOD? YES NO
2. During the pregnancy, was the mother exposed to RUBELLA (3 day, German, or "soft" measles)? YES NO
3. At birth, did the baby weigh LESS THAN 3½ pounds (1500 grams)? YES NO
4. Was there an RH (blood incompatibility) problem that required blood transfusion? YES NO
5. At birth, were there any defects involving the baby's head, ears, nose, or throat? YES NO
6. Has the baby been SERIOUSLY ill since birth? YES NO
7. Do you have reason to be concerned about this child's hearing? YES NO

IF additional information is required, you may expect to receive a telephone call from a professional staff member within approximately six months. Should you have any questions, call 533-6175, Salt Lake City, Utah.

HOSPITAL STAFF: Please mail the original to this address and place the carbon in the baby's file, if desired.

Speech Pathology/Audiology Section
Utah State Division of Health
44 Medical Drive
Salt Lake City, Utah 84113

SDH–BSHS–10–3/76

1896

STATE OF UTAH—DEPARTMENT OF SOCIAL SERVICES

Governor

PAUL S. ROSE
Executive Director

DIVISION OF HEALTH
44 MEDICAL DRIVE
SALT LAKE CITY, UTAH 84113
AREA CODE 801

LYMAN J. OLSEN, M.D., M.P.H.
Director of Health

Board of Health
Air Conservation Committee
Health Facilities Council
Medical Examiner Committee
Nursing Home Advi[illegible]oun
Water Pollution Com[illegible]ee

FAMILY HEALTH SERVICES
Bureau of Handicapped Children's Se
Bureau of Special Health Services
Bureau of Maternal & Child Health S

Speech Pathology/Audiology Section
533-6175

TO MOTHERS OF NEWBORN BABIES:

The attached questionnaire was devised to help identify hearing-impaired children during their first year of life. Your cooperation is appreciated in completing the questionnaire and returning it to the hospital nurse. If one or more of the questions are answered "yes" you will be contacted by a member of our staff when your child is about six months old.

If you have other children with suspected speech, hearing or language problems, we encourage you to contact your private physician, speech pathologist or audiologist, your local public health nurse or the Speech Pathology/Audiology Section, State Division of Health.

The incidence of severe hearing loss is only one in about 1500 newborns. The chance of your baby's involvement is extremely small, even if one or more of the questions is answered positively.

Thank you,

Thomas Mahoney

Thomas Mahoney, Ph.D., Director
Speech Pathology/Audiology Section

TM/jn

SDH-BSHS-11-3/76

Can your baby hear?

Your baby's most important learning will take place between birth and 3½ years.

Most important of all, your baby will learn how to communicate – first to understand what people say, and then to start talking himself. To do this, your baby must have normal hearing!

You, the parent, are the best person to find out if your baby has normal hearing, providing you know what to look for.

The information on the other side of this card is a basic guide. As the weeks and months go by, check to see if your baby can do most of the things listed. If not, don't wait! He may have a hearing problem.

Your baby's hearing can be tested as early as six months of age, and sometimes even earlier. If you suspect your baby has a hearing problem, tell your doctor immediately or contact your local hearing and speech clinic. It's important that he get proper medical help and receive special training, if needed.

Sponsored by:

HEARING ALERT!

a program of

Alexander Graham Bell Association for the Deaf
3417 Volta Place, NW, Washington, D.C. 20007

For additional assistance, call 533-6175
SPEECH PATHOLOGY / AUDIOLOGY
44 Medical Drive
Salt Lake City, Utah 84113

How often have you been asked –

Doctor, Is My Baby Deaf?

DANGER SIGNALS

If a newborn baby does not exhibit a startle reflex in response to a sharp clap within 3-6 feet.

If at 3 months the child has not developed auditory orienting reflexes (searching for the source of a sound).

If at 8 to 12 months the child does not turn toward the source of a sound – a whisper, a rattle, a spoon in a glass, or crinkling paper – originating less than 3 feet behind the child after a nurse has caught his attention and as his mother is holding him.

If at 24 months the child cannot identify an object by spoken stimulus, cannot repeat a phrase, and does not use some short phrases in talking.

If parents report the child is not awakened or disturbed by loud sounds, does not respond when called, pays no attention to ordinary crib noises, uses gestures almost exclusively to establish needs and desires in lieu of verbalization, or watches parents' faces intently.

If there is a history of upper respiratory infections, chronic middle ear trouble, meningitis, familial deafness, maternal rubella, prematurity, Rh incompatibility, birth trauma, or high fevers.

Note: Any of these symptoms may result from other deficits alone or in combination with a hearing loss. Their presence, however, should be considered a sufficient reason for further assessment.

For additional assistance, call 533-6175
SPEECH PATHOLOGY / AUDIOLOGY SECTION
44 Medical Drive
Salt Lake City, Utah 84113

CHECKLIST

Early detection is an important part of helping a child with a hearing loss. Keep this checklist and observe your child during early years. You are the link to health and happiness.

Birth to 3 Months

Is startled by loud sounds.
Is soothed by mother's voice.

3 to 6 Months

Turns eyes and head to search for location of sound.
Responds to mother's voice.
Imitates his own noises — oohs, ba-bas, etc.
Enjoys sound-making toys.

6 to 10 Months

Responds to his own name, telephone ringing, and someone's voice, even when not loud.
Understands "no," "bye-bye," and similar common words.

10 to 15 Months

Can point to or look at familiar objects or people when asked to do so.
Imitates simple words and sounds.

15 to 18 Months

Follows simple spoken directions. First words are well on their way — go, bye-bye, bed, no-no, out. By 18 months, there should be noticeable increase in vocabulary.

KEEP THIS CARD

STEPS TO TAKE IF HEARING LOSS IS SUSPECTED.

1. *Pediatric Assessment* with particular attention to the upper respiratory system.

2. *Otologic and Audiologic Assessment* to answer these questions

   - What is the causal picture?
   - Physical condition of the ears, nose, and throat.
   - Is hearing involved?
   - If so, *how much* does the child hear?
   - What course of treatment and education is indicated?

3. Specific attention to factors affecting *developmental language and speech,* including social and economic deprivation.

4. *If an irreversible loss is established,* the physician should help parents bridge the gap from the medical to an educational program by referring them to the Alexander Graham Bell Association for:

   - Location of nearest clinic, school, or class for children with hearing losses.
   - Information kit for parents.
   - Lists of books and pamphlets on impaired hearing written for parents.
   - Address of local parent group affiliated with the A.G. Bell Association.
   - Correspondence with other parents.

HEARING LOSS CAN AND SHOULD BE DISCOVERED LONG BEFORE SCHOOL AGE.

Prepared in cooperation with
William G. Hardy, Ph.D., Director
Hearing and Speech Center
Johns Hopkins Hospital, Baltimore, Md.

Distributed through **HEARING ALERT!,**
a program of

**ALEXANDER GRAHAM BELL
ASSOCIATION FOR THE DEAF**
3417 Volta Place N.W. Washington, D.C. 20007

For additional assistance, call 533-6175
Speech Pathology / Audiology Section
44 Medical Drive
Salt Lake City, Utah 84113

TELEPHONE QUESTIONNAIRE

FOUR MONTHS

Will you please indicate the appropriate answer for the following questions and return this with your reply to the letter.

	NO	YES
1. Have you any worry about your child's hearing?		
2. When he is sleeping in a quiet room does he move or begin to wake up when there is a loud noise?		
3. Does he try to turn his head toward an interesting sound, or when his name is called?		

SIX MONTHS

1. Have you had any worry about your child's hearing?		
2. When he's asleep in a quiet room, does he move and begin to wake up when there is a sudden noise?		
3. Does he turn his head toward an interesting sound or when his name is called?		

EIGHT MONTHS

1. Have you had any worry about your child's hearing?		
2. When he's sleeping in a quiet room, does he move and begin to wake up when there's a loud sound?		
3. Does he turn his head directly toward an interesting sound or when his name is called?		
4. Does he enjoy ringing a bell or shaking a rattle?		

TEN MONTHS

1. Have you had any worry about your child's hearing?		
2. When he's sleeping in a quiet room, does he move and begin to wake up when there's a loud sound?		
3. Does he turn his head directly toward an interesting sound or when his name is called?		
4. Does he try to imitate you if you make his own sounds?		

PUBLIC AWARENESS

Screening systems and referral systems will not locate all hearing impaired infants. An educated, aware public is a very important aspect of infant programming. A public that is aware of the problems associated with hearing impairment in children and of programming for infants is a critical aspect of programming. Approximately 40% of referrals have come from the public.

Public awareness is an ongoing process. A program cannot make the public aware of their program then assume they will continue to be informed. Public awareness attempts to reach the parents of children who need assistance now. There is a constant changing group of parents and children who need assistance.

It is suggested that one staff member be given the responsibility of public awareness and allowed time to develop and carry on an ongoing awareness program.

Newspapers are always looking for public interest articles. Local newspapers are usually very cooperative and have proven a good source for referrals. Articles about local families with hearing impaired infants are usually welcomed. State-wide newspapers have also been very cooperative and articles get wide coverage.

University public education television studios are a good source for public awareness. These studios can produce and televise programs with no charge to the agency. Local talk shows have been a good source of awareness. Sponsors can be found for prime time showing also. Television awareness spots are available from the Bill Wilkerson Speech and Hearing Center in Nashville, Tennessee and can be adapted for local use.

Local radio stations are usually looking for local interest items. Also, radio spots can be developed for public service announcement times.

The public meeting is an invaluable mechanism for public awareness. It sometimes seems futile to talk to a few people assembled at a PTA meeting or a civic club meeting, but information disseminated at these meetings seems to have a ripple effect.

If a staff member is assigned to public awareness and develops an on-going program, many infant hearing impaired children will profit from early intervention as a direct result.

REFERRAL SYSTEM

It is imperative that a staff member be assigned to develop referral sources, then refine an expeditious referral system. The first thing that has to be done is to establish referral sources.

Public awareness is a very important referral source and was discussed in the previous section. It is important to work out a referral relationship with all the agencies and professionals that may be working with hearing impaired infants. Those agencies who often are in contact with these children are: (1) the state health agency, (2) audiologists, (3) ENT specialists, (4) local health nurses, (5) head start programs, (6) speech and hearing clinics, (7) pediatricians, (8) public school child find programs, and (9) special education facilities.

A parent infant program will need to contact these agencies and make them aware of the services available and provide an easy referral system. It is important that the referring agency receive acknowledgment of the referral and be made aware of the disposition of the case. This can be done by form letters.

The parent infant program should have a specified referral flow that insures careful, expeditious movement of the child from the referral stage to the treatment stage. It is recommended that one person in the program be given responsibility for all referrals. The following is an example of a referral system and form used for tracking the flow of the child while in the referral service seeking stage.

A well defined referral system with one person responsible is a necessary component of an effective model for early home intervention.

Managing Agency________________

Cooperating Agency________________

REFERRAL FLOW CHART

Name:________________Parents:________________

Birth date:________________Date of referral:________________

Phone:________________Address:________________

1. Referring agency:________________Date:________________

   a. Comments:________________

2. Type of referral:________________

3. Acknowledgement letter:________________

4. Initial phone call to parents: a. Date:________ b. F. O. scheduled:________________

   c. Comments:________________

5. Initial home visit: a. Date:________ b. Person visiting home:________________

   c. Case history taken:________________ d. Results of visit:________________

   ____

6. Initial audiological evaluation: a. Date:________Audiologist:________________

   b. Results:________________

   ____

   c. Audiologist's recommendations:________________

   ____

   ____

7. Disposition:

   a.______Accepted into program (1)________________Date of family orientation

   (2)________________Assigned Parent Advisor (3) Date of commencement of

   home intervention program________________.

   b.______Not accepted into program (1) Reason________________

   ____

   c.______HOLD (Pending further information) Week #1________________

   Week #2________________Week #3________________Week #4________________

   d. Disposition letter sent. Date:________________

THE ENTRY PROCESS

Psychological-Emotional Support for Parents of Hearing Impaired Infants During the Service Entry Period

Introduction

Until recently, educational programming for the handicapped child has concentrated on programs and services for the child, while only minor auxiliary services existed for parents. Recently, much more is being done to involve the parent in the handicapped child's education and programming; however, little is being done directly with parents to support them in the psychological-emotional problems associated with having a handicapped child. The first few days and weeks after discovering their child has a handicap are extremely critical to the parents. Generally educational and intervention programs have not been involved with parents and child during the discovery and diagnosis of the handicap. This is a description of a psychological-emotional support program to parents of handicapped children during the period of the discovery of the handicap, diagnosis and placement.

Background and Statement of Problem

The Utah Parent Infant Program serves hearing impaired infants and children from birth to six years. It provides service through home intervention using weekly home visits to families in the program. It currently has a psychological-emotional support system which includes a family orientation session, emotional support during home visits, individual counseling, parent group counseling sessions and backup psychological support. These are initiated when the family is admitted to the program; however, by this time, there are often psychological and emotional problems already occurring. There have been delays from two to ten months from the time the child is first tested until he enters the program. Some parents have received diagnostic information which has been confusing, threatening and often contradictory. The "oral" and "total" factions frequently contact the parents and cause confusion and stress. There is need for parent support during this critical early period.

Review of Literature

There is sufficient literature available to make the profession cognizant of the need for psychological-emotional support for parents of handicapped children. This literature also provides some philosophies and guidelines for programming for parents of handicapped children. This review of literature will investigate parents' reactions to having a handicapped child, their need for professional support, their response to this support and research and programming in the area of psychological-emotional support for parents.

Parents' Reactions to Having a Handicapped Child

There is a body of information concerning the general shock and negative reaction to "producing" a handicapped child. Coughlin (1947) has expressed the view that a defect in the child brings deep-seated parental feelings to the surface, feelings which, had the child been normal, would have remained repressed.

The first reaction to finding that a child has a handicapping problem is generally distress. Ehlers (1966) found that the mothers of retarded children typically reported "being shocked" and "disbelieving" when their child's condition was first confirmed.

The very identification or labeling of a person in the role of parent of a handicapped child nearly always comes as an unpleasant surprise. The expected perfect child, as pointed out by Schlesinger and Meadow (1972) is an anticipated gift to the family. If the child fails to be perfect, conflicts arise even in the best adjusted parents. The very presence of a handicap means that the parents' hopes and dreams have not been fully realized (Newby, 1964).

Even the birth of a normal child is a potential life crisis. The life style of family members is almost always changed creating a readjustment of roles within the family. The child to be is usually idealized as one who will meet or surpass his parents' achievements. He is generally perceived as giving pleasure (Schlesinger and Meadow, 1976). They contend that if the child is not perfect, latent conflicts are revived for his parents (Schlesinger and Meadow, 1976, p. 36).

> During the process of suspecting, recognizing, and identifying a handicap, it would appear that the following emotions are common among parents: shock, bewilderment, sorrow, guilt and anxiety.

Olseon (1975) says that when a couple decide to have a baby, they do not bargain for a handicapped child. "No parents pray for a handicapped child." Schlesinger and Meadow (1976) say that bewilderment and shock occur because of the discrepancy between expectations and reality. Sorrow may be accompanied by a genuine mourning reaction for the loss of the expected perfect child. Parenthood, according to Cummings, Bayley and Rice (1966, p. 595):

> . . . typically offers an adult a series of opportunities for concrete affirmation of his generativity for increased knowledge, for vicarious approximation of his ego ideals and for experiencing

> his effectiveness in bringing a productive
> situation to fulfillment.

But individuals socialized to be parents of normal children face an entirely different process when they become parents of a handicapped child (Meadow and Meadow, 1971).

Klaus and Kennell (1976) describe the stages that parents go through in reaction to having a handicapped child. The stages they give are (1) shock, (2) disbelief (denial), (3) sadness, anger and anxiety, (4) equilibrium and (5) reorganization. The amount of time that a parent needs to deal with the issues of a specific stage varies but the sequence reflects the natural course of most parental reactions to their malformed infant. Figure 5-1 describes these stages (Klaus and Kennell, 1976, p. 172):

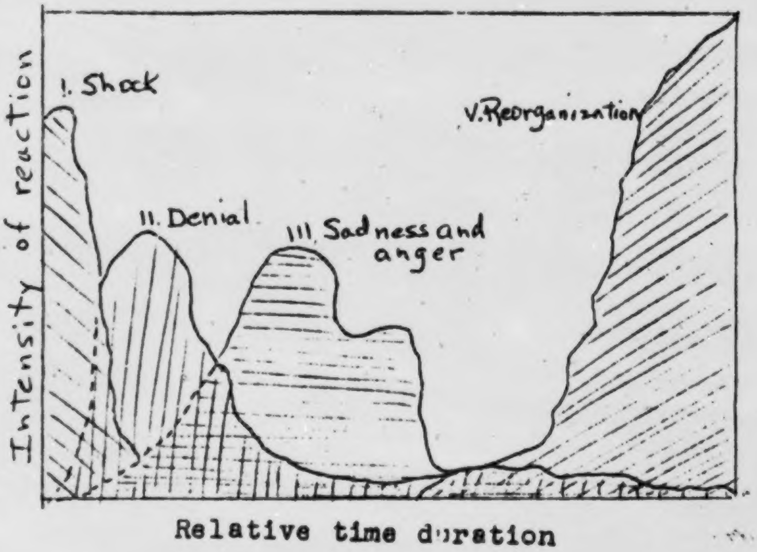

Fig. 5-1. Hypothetical model of the sequence of normal parental reactions to the birth of a child with congenital malformations. (From Drotar, D., Baskiewicz, A., Irvin, N., Kennell, J. H., and Klaus, M. H.: Pediatrics 56:710-717, 1975).

Need for Professional Support for Parents

While the task of being a new parent is a great challenge, being the parents of a handicapped child involves so many unknown factors that parents have a great need for support and assistance. Lillie (1969, p. 2) contends:

> The birth of a child does not automatically turn two human beings into understanding and informed parents. Nor does the birth of a hearing handicapped child mean that his parents are endowed with all the understanding and acceptance necessary for them to help their child into a whole person. These parents need guidance. Guidance as far as what to do and when. They need information. Information about normal child development and how a hearing loss may or may not affect this development. They need information about behavior and child management, problems that all parents encounter, as well as the effects of the hearing loss. They need to be given a realistic picture of their child, his abilities and difficulties.

Barsch (1968, p. 95) in a study of five physical handicapping conditions indicates:

> The period of initial concern is considered to be the single, most critical period in the life of the parent of the handicapped child. It is within this period that the major adjustment takes place . . . .
>
> . . . by the time the child's parent is reached whatever the dynamics of those early moments, the feelings and reactions of the initial signs of deviation have historically been interwoven into the parental personality with the individual fibers indiscernable within the total fabric.

The diagnostic period's effect on the parent has been virtually ignored by professionals and researchers alike.

The parent must needs sustain two general roles. The first is the expressive role which includes the acceptance of the handicap, the handling of guilt feelings and the ability to cope with the effects of the handicap on neighbors, relatives, and the child. The second is the instrumental role which encompasses instruction about the hearing impairment and how to handle the child in light of it (Begab, 1956 and Ross, 1963).

A Need for Improved Professional Services for Parents of Handicapped Children

Persons called on to deal with handicapped individuals and their families are usually untrained in the dynamics of psychotherapy and counseling (Barsch, 1968). The physician, according to Meadow and Meadow (1971), frequently possesses inadequate knowledge concerning a particular handicap. He is seldom prepared or able to render the type of emotional support or to disseminate the valid information the parents need at this time. When it is not feasible for this individual to provide the counseling needed, the physician should take the initiative to refer the parents to a community counseling service. According to the Illinois Commission on Children (1968) professionals dealing with the parents of hearing impaired children often display: (1) lack of basic understanding of the "impact" hearing impairment has on the entire family; (2) little knowledge of existing services and resources; (3) a failure to coordinate services of agencies; (4) a limited staff to provide adequate services; (5) a lack of regard for the importance of time between the identification of the hearing impairment and the involvement of the family; and (6) a lack of a continuity of services.

Most teachers and audiologists, while important members of the team working for the child and his parents, fail to handle the emotional crisis. They delve into explanations of instrumental needs. They make demands on the parent which often result in discouragement for the family (Meadow and Meadow, 1971).

Klaus and Kennell (1976) state that it is disturbing for parents to encounter a discrepancy between their own intense emotional turmoil and what they believe is a lack of feeling on the part of the professionals. Carr and Oppe, in Klaus and Kennell, (1976, p. 177):

> The physician's objective professional manner may sometimes be mistaken for a lack of sympathy and may be met by generalized outrage on the part of the parents. Many physicians are able to compromise, maintaining their own standards of correct professional behavior, and at the same time fulfilling some of the parents' needs for support. The baby can be presented to the parents in such a way that his attributes and normal features are highlighted. It is desirable to do this shortly after birth in the presence of both parents. This demonstrates to the parents that the hospital staff considers the baby an acceptable substitute for the wished-for baby and not a "piece of damaged goods."

Ineffective professional stances have created a traumatic event for parents. The professional often uses the hit-and-run technique of providing threatening information, then leaving the parent laden with feelings but without help to deal with those feelings. Alternatively, the professional may attempt to deal with the parental anxieties by minimizing the problem or by giving false hope (Schlesinger and Meadow, 1976).

Kendall (1970, pp. 63-64) surveyed thirty-two mothers of hearing impaired children. He documented professional care and support received during the diagnostic and entrance phase of programming. He reports the following findings:

> All of the mothers in this study suspected that their children were hearing impaired before the children were three years old. Sixty-one percent suspected a loss before their children were twelve months old. Eight-seven percent felt their children were hearing impaired before they were twenty-four months old.

After the mothers suspected a hearing loss, twelve to thirty months elapsed before the diagnosis of hearing impairment was made by a professional.

In sixty-two percent of the cases these mothers reported first seeing either a general practitioner or a pediatrician. The remainder saw an otologist or an audiologist.

Sixty-one percent of these mothers were not satisfied with the help they received from these professionals concerning their questions about hearing impairment.

The results indicated that most of these mothers either suspected or were certain that their children were hearing impaired before they visited a professional.

This group of mothers were primarily interested in learning their roles, in helping their children and finding suitable educational programs for them.

From Kendall's study and other literature reviewed it seems clear that parents of handicapped children are in need of comprehensive support services. There seems to be a gap between services needed, both quality and quantity, and those which have been provided.

Programming for Psychological-Emotional Support

Optimally, educational intervention will occur early in the life span of the exceptional child. Professionals should meet the parents shortly after the disclosure of the diagnosis (Schlesigner and Meadow, 1976). They state that the professional may be ready and eager to initiate education or therapy while the parent is still dealing with the impact of the diagnosis and his contact with the experts.

Klaus and Kennell (1976, p. 117) say that:

> Involving the parents in the care and planning for their infant allows them to enjoy satisfying feedback from him. It is also at this early stage that the groundwork is laid for an effective alliance of parents and professionals concerning treatment.

They continue with:

> . . . a physician who knows about the disorganization which parents experience during the stages of shock and denial will realize that information about the child's condition and progress may have to be repeated many times.
>
> It is important to add that to talk with angry or depressed parents is not the natural inclination of the obstetrician, pediatrician, or nurse. The gratifications of these professions lie in either the delivery and care of the healthy infant or in the use of their medical knowledge to heal or remedy.

Lilly (1976) states that one of the objectives of social and emotional support programs for parents is to increase the parents' feelings of their own importance as worthwhile human beings. He explains that once identified, social and emotional needs of parents can be met in different ways including parent group meetings.

Enzer in Lilly (1976) states that it is essential that a true alliance be created between the parents and the professional. He says that fundamental to such a relationship is mutual respect, honesty and "an egalitarian attitude on the parts of both workers and parents."

Schlesinger and Meadow (1976) say that often the diagnostic crisis is followed by a treatment crisis. They list four major areas that cause such crises. (1) Parents often are bombarded with overwhelming advice. (2) Parents often receive conflicting or incompatible advice. (3) Some types of advice may revive parental sorrow and fear. (4) Advice is given that usurps parents' "right to know" or "right to decide."

Summary

This review first discussed literature concerning parents' reactions to having a handicapped child. This literature clearly demonstrates that parents have many psychological-emotional problems when they discover that they have a handicapped child. Next the literature review pointed out the need for psychological-emotional support for parents by professionals. It documented the apparent lack of this support in intervention programs. The review then indicated some ways of programming for psychological-emotional support for parents.

OBJECTIVE, GOALS, PROCEDURES AND EVALUATION

The basic objective of this program is for parents to receive maximum psychological and emotional support during the discovery and diagnostic stage of their child's handicap. There are five basic goals which should achieve this objective.

Goal #1--Parent Infant Program will establish procedures for working with referral and diagnostic agencies.

PROCEDURE--(1) Program Director and Coordinator develop a detailed cooperative plan. (2) Copies distributed to agencies. (3) Hold meetings with agencies and program personnel to finalize program. Particular attention is given to the psychological-emotional well-being of parents.

Goal #2--Parent Advisors (hereafter referred to as P.A.) will be trained to work with parents, doctors, and other diagnostic people.

PROCEDURE--(1). Project psychologist holds training sessions on dealing with psychological and emotional needs of parents. (2) Parent Advisors will meet with an otolaryngologist for training in working with doctors. (3) P.A. will meet with audiologists for training in working with audiologists. (4) P.A. trained by project coordinator in delivery of support services.

Goal #3--Parents will move quickly through the diagnostic period without loss of time.

PROCEDURE--(1) All referrals received by the Parent Infant Program will be guided through program coordinator. (a) She or he will discuss diagnostic services and agencies available for parents. (b) Parents will choose a diagnostic agency. (c) An appointment will be made with agency. (d) P.A. nearest family will be assigned to them. (e) P.A. will accompany parents to all diagnostic sessions. (f) P.A. will assist in arranging any further testing. (g) P.A. will report to program weekly on diagnostic progress. (2) All referrals received from diagnostic agencies will be accompanied by P.A. when they go for testing. (a) Agency will call Parent Infant Program when they have an appointment for hearing evaluation of an infant. (b) Parent Infant Program Coordinator will assign P.A. to case. (c) P.A. will accompany parents to all testing.

Goal #4--Parents will be accompanied by P.A. to all diagnostic sessions.

PROCEDURES--(1) A P.A. nearest the referral will be called and assigned to work with parents throughout the diagnostic period. (a) P.A. will call parents. (b) P.A. will make home visit to gain background information. (c) P.A. will accompany parents to testing. (d) P.A. will assist in testing as appropriate. (e) P.A. and parents will meet with doctor or diagnostician to discuss the results of the testing. (f) P.A. will make a home visit to provide further information and support. (g) P.A. will assist in locating and making appointments for further testing. (2) Parent Advisors will be paid a fee for services for each visit.

Goal #5--Parents will receive non-conflicting, understandable information on the child's handicap.

PROCEDURE--(1) Each P.A. will be trained to work with doctors and diagnosticians. (2) P.A. will be present to get first-hand information from agency. (3) P.A. will call agency if any questions or problems arise. (4) When parents go to another agency, P.A. will update the new agency on all testing results from previous testing. (Will not wait for written reports.) (5) At the completion of testing, program coordinator, testing agencies, parents and P.A. will meet to plan the families' Individual Intervention Plans. (6) Each P.A. will provide reviews and additional information as appropriate during home visits for the first few months of the program.

The objective of psychological and emotional support during the discovery and diagnostic stage of the child's handicap will be met by providing a listening, caring and helping professional for the parents during this time. The Parent Advisors will insure that the psychological and emotional problems associated with lack of service, delays, inconsistent and conflicting information do not occur. They will give further psychological and emotional support by being present, by listening, and by supporting. The entire Parent Infant Program will provide support, training and services which will enable the Parent Advisors to give this service.

Psychological and emotional support programs for the parents will be combined with this proposed service. This is designed to meet the total needs of the families in the program.

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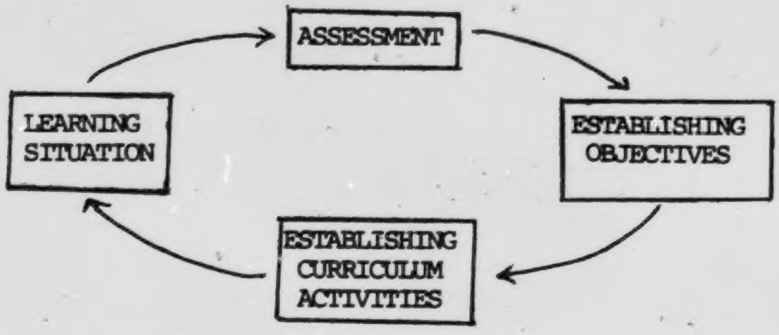
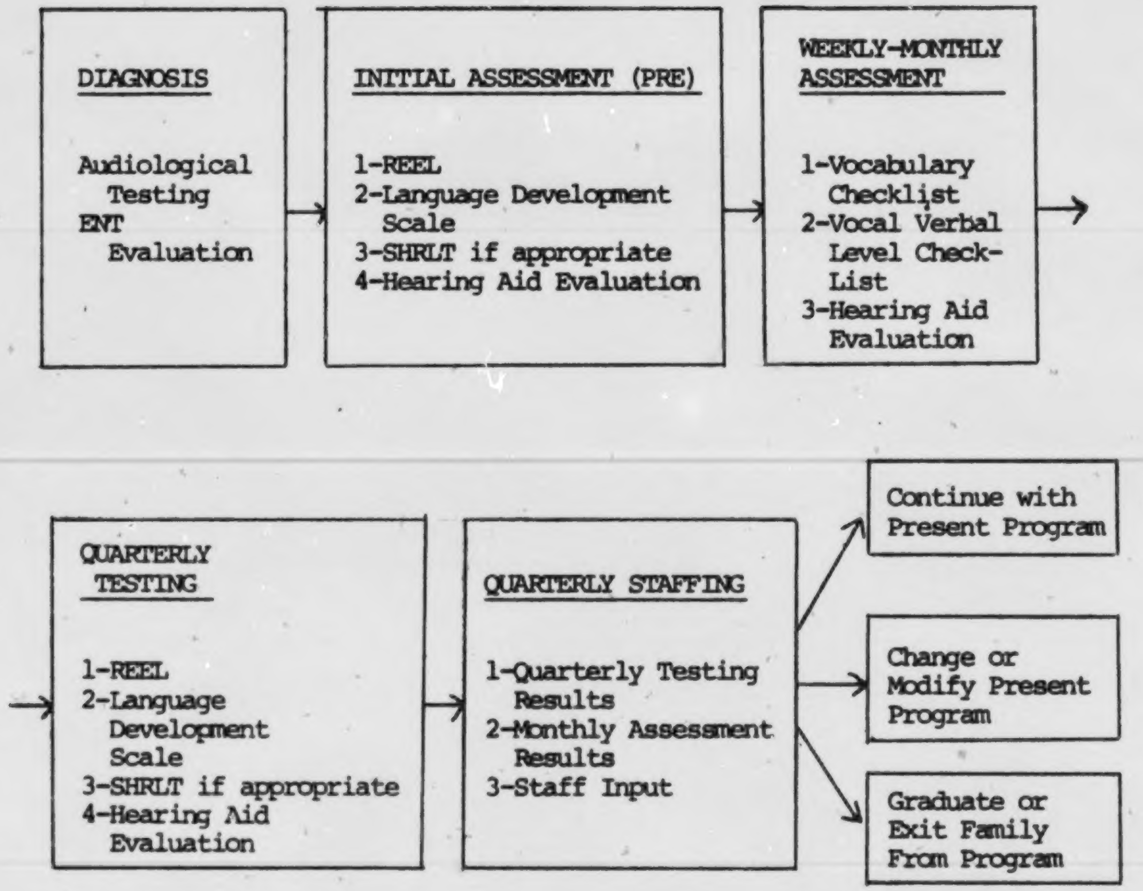
CHILD ASSESSMENT

A program for hearing impaired infants is by nature a diagnostic program. The program must have a sensitivie child assessment system in order to determine the appropriateness of the programming. The program thus must be sensitive to the results of assessment. Lillie (1972) describes a continuous assessment-planning model which provides this sensitive programming.



After the child is diagnosed, initial or pre-assessment data must be collected to determine the effect of later treatment. Weekly data is collected and summarized monthly. Developmental testing is done every three months. The monthly assessment data and the quarterly developmental results are gathered and examined at a quarterly staffing for each child. The results of the total child assessment are used in determining the effectiveness of programming and for program planning for the next three months. The following figure depicts the child assessment component.


DIAGNOSIS
Audiological Testing
ENT Evaluation
INITIAL ASSESSMENT (PRE)
1-REEL
2-Language Development Scale
3-SHRLT if appropriate
4-Hearing Aid Evaluation
WEEKLY-MONTHLY ASSESSMENT
1-Vocabulary Checklist
2-Vocal Verbal Level Check-List
3-Hearing Aid Evaluation
QUARTERLY TESTING
1-REEL
2-Language Development Scale
3-SHRLT if appropriate
4-Hearing Aid Evaluation
QUARTERLY STAFFING
1-Quarterly Testing Results
2-Monthly Assessment Results
3-Staff Input
Continue with Present Program
Change or Modify Present Program
Graduate or Exit Family From Program

Child Progress

The following areas of child progress are assessed. The assessment tool, form or process, and reporting systems are given with each area of evaluation. The plan is detailed below:

1. Hearing sensitivity (ability). Hearing is evaluated by clinical audiologists at entrance to program, and thereafter as recommended by the managing audiologist.

2. Hearing Aid. (a) Selection of aid, see pages 116, 120. Parents and parent advisor keep behavioral data on trial aids using forms shown in the Direct Services to Family Section. (b) Use of aid by the child--Parents keep a log on the child's acceptance and use of the aid. This data is transferred to the notebook of the parent advisor.

3. Vocal-verbal stages. The stage of development from one-syllable utterances to transforms is identified and recorded by the parent advisor each month. (See Reporting.)

4. Language Development. Both receptive and expressive language development of the child are assessed initially and periodically. Expressive language--(1) Behavioral data is collected in logs and reported on a monthly report form. (2) The REEL test is administered at entrance into the program and every three months thereafter. Receptive-language--(1) the REEL test is given at entrance to the program and every three to four months thereafter. (2) Project SKI*HI Receptive language test is given at entrance and every three to four months after. Vocabulary development and articulation development is monitored on the weekly-monthly reports. The parents use SKI*HI Language Development Scale at entrance and every three months.

5. Auditory Development. The child's development is evaluated as an integral part of the auditory skills teaching program. Evaluation is an essential part of the program. Progress is reported on the montly report form.

Parent Progress

1. The parent's ability to manage the hearing aid, conduct auditory development activities and facilitate language development is evaluated by the parent advisors and recorded on the monthly report form. Each of these abilities or performances are rated on six levels from no competency to complete competency.

2. The parent who has a child in the total communication program is evaluated monthly to assess progress in learning and using this form of communication. This is reported on the monthly report.

3. A parent's understanding of special information related to his child's handicap is evaluated at the end of the eight week parent session.

4. The psychologist and parent advisor meet periodically to discuss the psychological well being of the family.

Communication Assessment

An essential part of child assessment is the evaluation of the child's communicative ability. The Program's first goal is to treat the child's hearing disorder. It is futile to begin a language program for a hearing impaired child when the hearing disorder has not been treated. The project first treates the child's hearing disorder with a complete amplification program. The following evaluation system describes how the effects of the program are evaluated and the child's ability to communicate are monitored. It also describes an alternate system of treatment of the hearing disorder if aimplification is not effective. The selected system was total communication.

The process of educating a hearing impaired child is not a procedure to make a good "oralist" or a good "total communicator" but to educate the child. The fact that a child is "oral" or "total" will not guarantee him an education nor a meaningful place in society. Language is an absolute prerequisite to an education and to a meaningful place in society. Often the hearing impaired child is deprived in language and therefore in educational attainment.

To insure that the deaf child is indeed gaining language it is imperative that his language growth be carefully monitored. When the child is not developing language then educational accountability demands that all possible avenues be tried to find that means by which the child will gain language. The process of evaluating and recommending a child for "total communication" is not a separate process but part of a total ongoing evaluation of all children in the project. Total communication or auditory approach are prescriptive methods of communication for a child. Total communication and/or auditory methods should be seen as part of the total process of educating a child, not a product of that process.

All children receiving services go through the assessment process described in Assessment. All children are initially fit with hearing aids, go through the hearing aid assessment program and receive auditory training. At the first staffing after the child has been in the program three months his communicative, auditory, and language development should be carefully examined. If the child demonstrated immediate response to audition and has demonstrated auditory development during the three month period, there is a good likelihood that he is a candidate for the auditory program. If the child shows no initial response to audition and is not developing auditory skills it is probable that total communication will be the most appropriate communicative method. This child should- be carefully monitored and evaluated and staffed for possible communicative change at the next staff meeting.

At the second staffing or after six months in the program, children who have demonstrated steady auditory development and have reached the gross environmental discrimination level or above will probably be recommended for an auditory program. Those children who do not spontaneously respond (without clues) to sound and are not developing auditory skills should be tried on a total communication approach to determine if language and communicative development can be accelerated.

After six months it will not be possible to make determination of the most appropriate communicative method for all children. For those children the determination should be made after nine months of treatment. No child should go longer than nine months without determining the method of communication. A period longer than nine months can be detrimental to the child and the parents. Sufficient data is available after nine months to make a good recommendation for communicative programming.

When the parents come in for family orientation they should be counseled that no determination of communicative programming will be made until the child has six months of treatment. They should be informed that at six months the program will make a determination of the most appropriate method.

It must be understood that the single most important aspect of programming for the deaf infant is the expeditious determination of the appropriate communicative method for the child. This determination can not be made solely on the degree of the child's hearing loss.

Assessment for Exit From Program

The goals of the Home Intervention Program are (1) to identify, evaluate and fit the child with amplification; (2) to provide the child with a meaningful auditory and linguistic home environment; (3) to support the parents through the difficult period of adjusting to a handicapped child. When these goals are reached, the project has accomplished its purpose and there is no need for further assistance.

It is critical that all project personnel and parents clearly understand that it is not the role of a home intervention program to give direct services to the child. It is not feasible to provide a professional to travel to a home to work on a one-to-one ratio with a child. Preschool and school programs provide direct services to the child. Therefore, when the home program has accomplished the above goals, it can terminate services.

After the child has been in the program twelve months or parents and child "appear" ready for "graduation" the staff will be asked to evaluate the child and family. At the child staffing, after twelve months in the program, the staff will be given evaluation forms and asked to complete their part of the evaluation. During the next quarterly staffing the child will be considered for "graduation" and appropriate recommendations made.

Process for "Graduation" of a Child and Family From Project SKI*HI

1. At the closest child staffing after twelve months in the program, evaluation forms will be given to the staff.

2. Each staff member should complete their part of the evaluation during the next three months. This will be done by using appropriate evaluation tools and behavioral observation forms and techniques.

3. This information will be brought together at the next staffing. The child will be considered for "graduation."

4. If not recommended for "graduation," the specific reasons will be delineated and recommendations for programming will be made.

5. If the child is recommended for "graduation," the parents will be sent a letter and a "graduation," certificate.

6. The parent advisor will make a final visit. It may be appropriate to "taper off" the visits from once a week to twice a month to monthly and then terminate in some cases.

7. Letters to appropriate agencies apprising them of the termination of services will be sent.

Criteria for "Graduation" of a Child and Family From Program

The following general guidelines should be followed for "graduation" of a child and his family from Project services:

I. The child and family should meet the following criteria:

A. The child should be fit with his own aids as a result of completion of hearing aid selection program.

B. The child should be wearing the aids at maximum function conditions during waking hours.

C. The parents should be competent managers of the child's hearing aids.

D. If in total communication, the parents should have been through the total communication training program and demonstrate competence in using total communication at 80 percent achievement on behavioral evaluation.

E. The parents should be competent managers of the auditory program by demonstrating achievement of goals on appropriate child auditory levels.

F. Child should demonstrate definite receptive language ability and demonstrate some expressive language. The results of all measures which are part of child assessment should indicate substantial growth between each testing period. The child should have language development and a level which definitely indicates that the child has a functional communicative system and that he will continue to develop language.

G. While the purpose of home intervention is to promote language development in the home, it is imperative that the family environment and interactions are adequate. Family members should demonstrate an overall acceptance of the child and a wholesome attitude. The parents should be ready for withdrawal of the support provided by weekly home visits.

II. The child should have been staffed and recommended for "graduation." Information from the child's profile form will be a major source of information for decision making.

III. There can be cases of "graduation" where the child and parents have not met criteria. In cases where the parents will not cooperate and have not demonstrated a willingness to work with the child, the family can be terminated upon recommendation of the staff. This type of termination should happen only when all measures possible have been taken to work with the family and they still will not cooperate.

Date ______________

EVALUATION OF CHILD FOR "GRADUATION" FROM PROJECT SKI*HI

Child ____________________________ Age ____ Birthdate __________

Date Entered Program ____

Preschool: Yes ____ No ____ Date entered ____________________

Date fit with aids ____________ Date of final selection of aids __________

Date of completion of home hearing aid Program __________________

Parent competent manager of hearing aid: Yes ____ No ________

Child accepts and wears aid during waking hours: Yes ___ No ___

Date commenced home auditory program ____________________________

Auditory stage child is on ______________________________________

Parent competent in managing the home auditory Program: Yes ______ No ________

Parents competent in providing a maximum language Environment: Yes ______ No ______

Parents completed total communication program and competent: Yes ______ No ______

Child's Receptive Language level and ability--state results of language assessment for a 9-month period and present level ____

____

Child's Expressive Language Level and ability ____________________

____

Are the parents meeting psychological and emotional expectations and ready for withdrawals of support:

____

RECOMMENDATIONS FOR "GRADUATION" - Are the parents and child achieving to capacity?

Parent advisor ____

Supervisor ____

Audiologist ____

Psychologist ____

Director ____

Date staffed for graduation _________________________________

Recommendations from staffing ______________________________

____

Disposition of case:

FAMILY ORIENTATION

As the family moves through the service entry stage it is important that they become aware of the services available to the family and what their involvement in the program will be. The family orientation meeting provides this opportunity plus makes possible obtaining pre-treatment assessment data.

The family orientation should take place within two weeks of the time the child is definitely diagnosed as hearing impaired. This meeting provides a great deal of psychological-emotional support because it describes assistance for the family after they have discovered their child's handicap.

The following are suggested components of the family orientation:

1. Show an overview slide program which describes the complete program.
2. Discuss with the parents the specific services, materials, and programs they will receive. Reassure them that they will receive the services and support they need to provide for their hearing handicapped child.
3. Listen--Let the family talk about their feelings, needs, and problems.
4. Explain the obligation of the family--What the program will ask the family to do--It is important they understand that the program's mission is to give support and assistance to the family, but the family will have to meet the challenges of having a handicapped child.

5. Sign all necessary forms (release of information, request for information, application for services, permission to test, permission to photograph, etc.)
6. Conduct Pre-Treatment Child and Parent Assessment
    a. REEL Test
    b. SKI*HI Receptive Language Test
    c. Language Developmental Scale
    d. Conduct further hearing testing
7. This is usually the best time to make impressions for the child's first ear molds.
8. Discuss the home visits they will be receiving. If they have not met their Parent Advisor, introduce her or tell them about her.

The family evaluation should give support to the family and help them to have hope and a positive attitude toward the future of their child.

It will be necessary to describe the programming which will lead to the most appropriate communicative programming for the child. Most parents will have no biases toward a particular communicative method, but will want the best for their child. However, it is important to emphasize to the parents that they should not make hasty commitments to a communicative method because of biases they may hear from other people. The program will make appropriate recommendations when they have data on the child's performance.

INFORMATION ON FAMILY SENT TO PARENT ADVISOR

Date Sent____________Parent Advisor_________

REPORT OF FAMILY ORIENTATION

CHILD________________________________

BIRTHDATE____________________________

ADRESS_______________________________

____

RESULTS OF LANGUAGE TESTING:

Reel: Rec.____Exp.____

SKI*HI Test:__________

RESULTS OF HEARING TESTS:

____

OBSERVATION OF CHILD'S PHYSICAL DEVELOPMENT

____

DATE TO BEGIN PARENT GROUP:

____

FORMS SIGNED BY PARENTS:

- ____Application for Service
- ____Request for Information
- ____Consent to Videotape
- ____Consent to Photograph
- ____Release of Information
- ____Consent to Test

IMPLEMENTATION OF HOME INTERVENTION PROGRAM

Impressions for molds______________

Fitting of aid_____________________

Home visits to begin_______________

Date________________________________

PARENTS_____________________________

HOSPITAL____________________________

PHONE_______________________________

ZIP_________________________________

COMMENTS OF FAMILY ORIENTATION

CHILD STAFFING

A quarterly staff meeting for each child is held in order to assess accumulated child assessment data and information about the child.

A pre-staffing letter is sent out in advance to inform all project personnel so that all relevant information can be brought together in these meetings. All persons working with each child are expected to be present at each staff meeting when the child is to be discussed.

The results from the staff meeting are typed and placed in the child's folder. For purposes of follow through, a child staffing disposition sheet is filled out in duplicate with one copy going to the staff member who is to follow through with a specific assignment and the carbon copy remaining with the secretary who will check when assignment is completed.

The parent advisor meets with the parents after the staffing and relays all relevant information and recommendations appropriate to the parents.

CHILD STAFFING SHEET

Date ____________

1. Child ______________________ Age ____ Birthdate _____________
   Sex _______ Address _________________ Phone __________________
   Father _________________________ Mother ______________________

2. Priority Managing Audiologist ____________________
   Managing Parent Advisor __________________

3. STAFFING BUSINESS:
   A. Managing Audiologist - Project Audiologist: _____________
   B. Parent Advisor/Supervisor: ______________________________
   C. Psychologist: ____
   D. Director: ____
   E. Other: ____

4. RECOMMENDATIONS: ____

5. ASSIGNED DISPOSITION ACTION:
   A. ______________________________________
   B. ______________________________________
   C. ______________________________________

PARENT ADVISOR
DATA REPORT
for
CHILD STAFFINGS

Name ____________________________ Date __________________

I. Hearing Aid Usage:

Acceptance of Aid ______________________________

Amount of time worn ______________________________

II. Auditory Level: ______________________________

III. Results of Language Test:

a. Ski-Hi A. _____ b. Reel Rec. _____ c. Dev. Scale

B. _____ Exp. _____ Rec. _____

C. _____ Exp. _____

D. _____

(Total) _____

IV. Language Level: ______________________________

V. Parent Management of:

H/A ______________________________

Auditory Stimulation ______________________________

Language Stimulation ______________________________

VI. Childs Behavior ______________________________

____

VII. Other Comments: ______________________________

____

____

VIII. Recommendations:

____

____

____

____

____

____

____

PERSONNEL: DESCRIPTION, MANAGEMENT AND SELECTION

The SKI*HI Model functions with a part-time director, a full-time supervisor, fourteen part-time parent advisors, a part-time audiologist, two consulting psychologists and a part-time secretary. Each position has specific role assignments.

Role Assignment

Director - 20% (one day per week)

1. Administrate and direct the total program.
2. Work directly with the administrator of the agency.
3. Give supervision to the supervising parent advisor and educational audiologist.
4. Conduct child staffing meetings
5. Correlate interagency cooperative effots.

Parent Advisor Supervisor - 100%

1. Have an active case load of 1 or 2 children as parent advisor and make weekly home visits.
2. Give direct supervision to part-time parent advisors. Visit each parent advisor on a systematic basis. Evaluate the status of the child and family and the parent advisor. Report to program director.
3. Provide telephone contact with all parent advisors every other week. See that parent advisors have all the materials and tools they need.
4. Be responsible for inservice training. This training will be given in four ways:
    (1) individual training and assistance as indicated by supervisory visits
    (2) small group training sessions as needed
    (3) inservice training sessions for all staff
    (4) basic training for all new parent advisors
5. Be responsible for office management.
6. Direct the referrals, case processing and entrance to service.

71

Educational Audiologist - 20% (one day per week)

1. Conduct audiological testing and hearing aid evaluations
2. Be responsible for the program's hearing aid system.
    - (1) purchase of new aids
    - (2) repairs
    - (3) electronic analysis of aids
    - (4) loaner aids
    - (5) administer the child hearing aid evaluation system

Parent Group Psychologist

1. Organize and conduct three groups of new parents in the program. These groups will be conducted as group counseling sessions to assist parents in acceptance of a handicapped child. He will conduct three eight-week parent groups per year.
2. Evaluate parent attitudes and psychological well-being.
3. Evaluate the effectiveness and results of each parent group by using instruments developed by Project SKI*HI. He will submit a written report within two weeks of the end of a session.
4. Submit a summary statement on important psychological factors of individual parents attending the group. This shall be done concurrent with the parent group meeting.

Part-time Parent Advisor

1. Work under the direction of the program supervising parent advisor in making weekly home visits to families of hearing impaired children. A home visit will consist of one hour in the home, preparation and report writing.
2. Attend staffings as scheduled by the program director for the purpose of evaluation for each child within her assigned case load.
3. Make special visits as directed by the program director and program supervising parent advisor.
4. Do necessary in-service training preparation and submit required reports promptly.
5. Attend audiological testings of children on case load if directed.
6. Participate in workshops called by the program director

Psychologist to Assist Parent Advisors

1. Work with parents and children as directed by the program director.
2. Attend periodic staffings of children as arranged with the program director.
3. Train appropriate personnel in counseling and parent relations.
4. Provide professional counseling services as appropriate.

Selection of part-time parent advisors seems to be an ongoing process. The Utah School for the Deaf Parent-Infant Program needs to recruit a few parent advisors each year. No certification for parent advisors is available or required in Utah. Therefore, the program sets its own standards for parent advisors. The following are requirements for parent advisors:

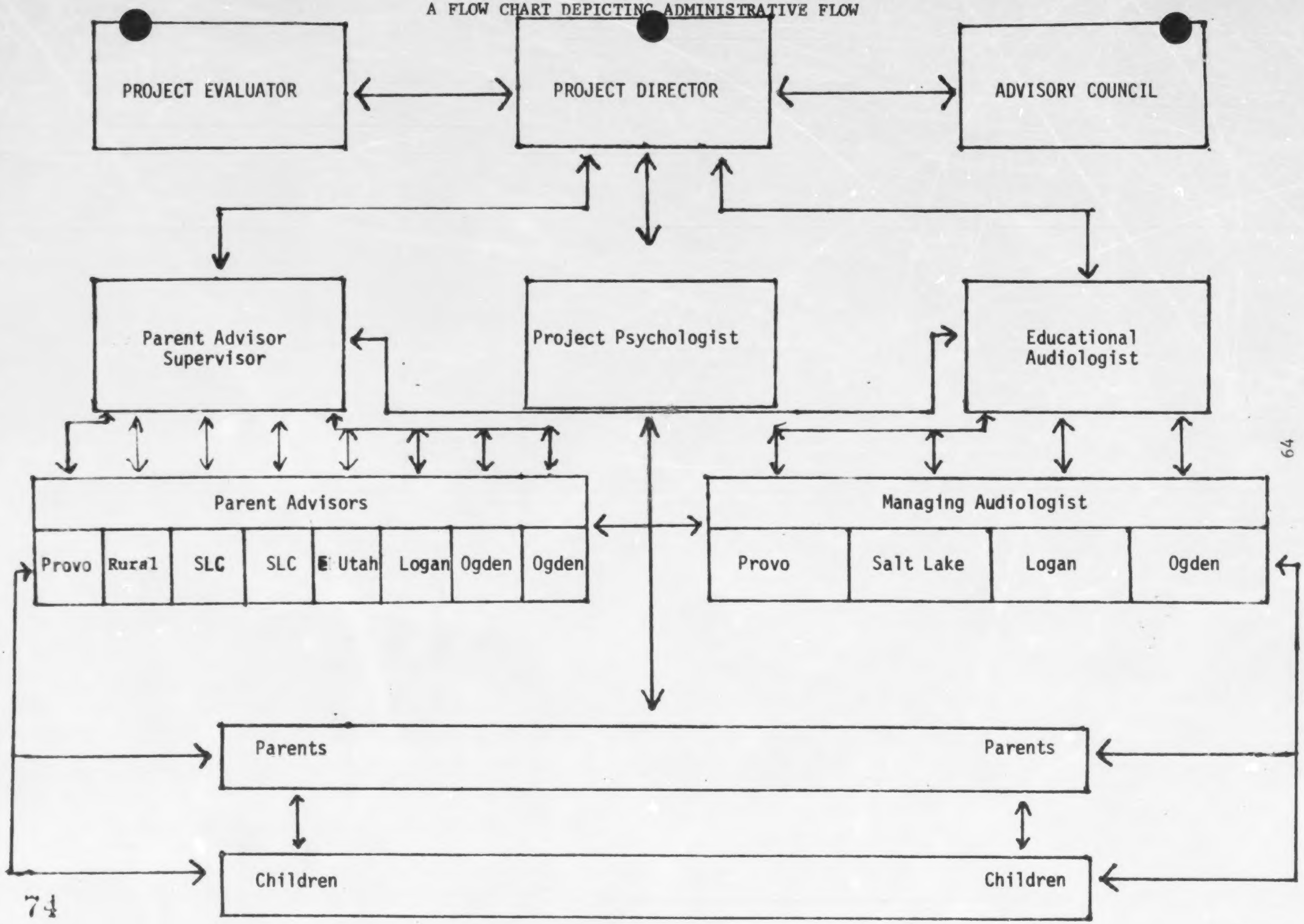
1. A minimum of a bachelor's degree in either education, speech and hearing, deaf education, nursing, social work, early childhood or a related field.

2. The new parent advisor must attend the comprehensive basic training session (2-4 weeks) prior to being hired.

3. If the person does not have a background in education of the deaf or speech and hearing, he/she is asked to acquire six to nine quarter hours over the first three years of service. If they do not have an early childhood background, they are asked to acquire six hours.

4. All parent advisors are required to keep their present certification valid in whatever field.

A FLOW CHART DEPICTING ADMINISTRATIVE FLOW


PROJECT EVALUATOR
PROJECT DIRECTOR
ADVISORY COUNCIL
Parent Advisor Supervisor
Project Psychologist
Educational Audiologist
Parent Advisors
Provo
Rural
SLC
SLC
E Utah
Logan
Ogden
Ogden
Managing Audiologist
Provo
Salt Lake
Logan
Ogden
Parents
Parents
Children
Children

A MODEL FOR DELIVERY OF SERVICES

The SKI*HI Model is a statewide or large geographic model which serves both urban and rural families. The low incidence of hearing impairment makes it extremely difficult to provide comprehensive services in small population areas. A statewide model makes it possible to provide complete services because the program will serve larger numbers of children.

Utah has a birth rate of 30,000 children per year and can expect approximately 24 deaf children per year in the state and up to 150 hard of hearing children. The Utah School for the Deaf Parent-Infant Program serves approximately 65-70 families at any given time. With this number of children, the program can provide all the components of the SKI*HI model.

The SKI*HI Model employs part-time parent advisors with one full-time supervisor. The use of part-time parent advisors has several advantages:

1. It eliminates extended travel time and expense. A local resident is recruited and trained and no parent advisors travel over fifty miles.

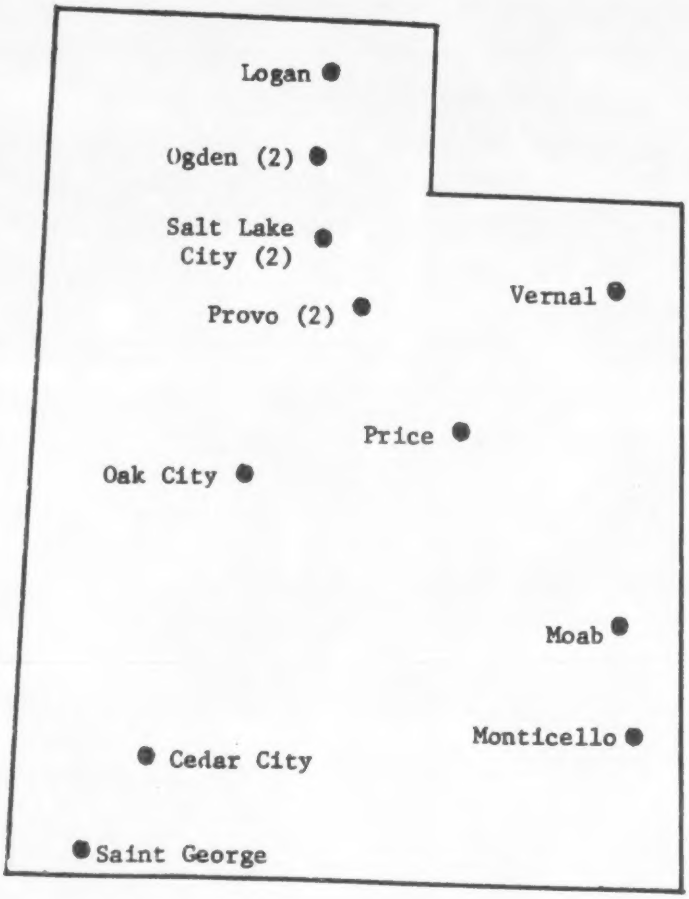
2. Local parent advisors are usually known and accepted in the community.

3. If full-time parent advisors are used it is often difficult to maintain an appropriate case load. The parent advisor may have too many or too few families to serve. Part-time parent advisors are paid on a fee-for-service basis. Therefore, there are no underload or overload problems.

4. There is an excellent source of professionals in trained people who are raising a family and are seeking only part-time professional work.

5. Local speech and hearing people can be used under extra contractual arranagements.

The parent advisors make a one-hour visit per week to each family. This can vary with the needs of the family. Some families need more frequent visits and sometimes a visit once or twice is sufficient. The basic home program and services are delivered through the parent advisors making these weekly visits. The following map depicts the placement of part-time parent advisors in Utah.


Logan
Ogden (2)
Salt Lake City (2)
Vernal
Provo (2)
Price
Oak City
Moab
Monticello
Cedar City
Saint George

Supportive services are delivered as follows: Audiological services are delivered through Utah State Health, Utah School for the Deaf and through clinics and private audiologists. Audiological testing and hearing aid services are provided by these agencies. Services provided by Utah State Health and the Utah School for the Deaf are without charge to the parents. The parents may locate these services prior to referral to the parent-infant program, or be referred by the program.

Psychological support, counseling and parent groups are provided by part-time psychologists without charge to the parents. The program pays on a fee-for-service basis.

Hearing aid services are provided by the program audiologist without charge to the parents. Trial hearing aids are sent to the home and returned by mail. Impressions for ear models are made in the home by the parent advisors and the molds are sent directly to the family. Parents have access to loaner hearing aids by calling the program collect and the loaner aids are sent immediately.

Parents are provided reading material through the Utah State University Exceptional Child Center Library Loan Program. The parents are given a catalogue of available books along with directions and forms for ordering the books. The books are mailed to the parents free of charge. Envelopes are provided for returning the books. This reading material covers a wide area including child development, various handicapping conditions, child management, etc.

Video playback units and total communication tapes are provided without charge to the parents. The machines are on loan to the parents. The parents' home insurance usually covers the instruments; however, the parents sign, accepting responsibility for the machines. They are delivered to the homes by the parent advisor.

Child development supportive services are provided through materials sent to the home, assistance by the parent advisor and through special group meetings on specific child development subjects.

The SKI*HI Model of delivery of service is weekly home visits made by local part-time parent advisors, supervised by a full-time supervisor. Supportive services are provided without charge to the parents. Most services are delivered to the home.

Parent-infant-home programming can be done without implementing the entire SKI*HI Model. Some replication programs have been in a position to implement the direct services to families only. In these cases, parent advisors make home visits but there are none of the administrative or supportive service components. There may also be situations where other components are necessary and/or some of the SKI*HI components are not appropriate or the program does not have the resources to provide them.

INSERVICE TRAINING

All incoming parent advisors must receive basic training in the home delivery of services. Project SKI*HI Outreach has developed a multi-media training package which allows program supervisors to completely train new parent advisors in the SKI*HI Model of delivery. The package includes six one-hour color videocassettes depicting delivery of each of the Home Hearing Aid, Home Auditory-Communication, and Home Language Lessons. Also depicted are thorough explanations and demonstrations of the Bzoch-League Receptive--Expressive Emergent Language (REEL) scale and the SKI*HI Receptive Language Test. Test segments for evaluating the viewer's grasp of some of the concepts in the Hearing Aid Auditory and Language programs also are provided.

In addition to the videotapes, the training package includes a Presentor's Manual which gives teaching guidelines, practicum suggestions, and evaluation methods for each lesson. Transparencies are also provided.

Inservice training sessions for parent advisors already working in the program are an integral part of the SKI*HI system. The Utah Parent-Infant Program holds a Fall and a Spring Inservice Workshop for all of its parent advisors. Guest speakers, new methods, and discussion sessions all are part of these workshops. Other states hold workshops on a specific subject in which there is a general need for further training. Project SKI*HI Outreach may help in the presentation of such workshops. Subjects may include psychological services, audiological services, screening, parenting and family dynamics, and the home hearing aid, auditory, communication and language programs.

INTERAGENCY COOPERATION

A program for infant and young hearing impaired children deals with a number of disciplines and thus with services and interests of various agencies with a state or community. A program that can access services and information provided by other agencies can provide better and more comprehensive services to families of hearing impaired infants.

The director or supervisor is in the best position to direct the program's interagency cooperation component. An initial program will have to be developed, implemented and maintained. One approach to interagency cooperation is to look at the various components of the program and ask what services or support can be obtained from other agencies. Another approach is to examine the various agencies to determine what service they can provide. Using either approach, one would then develop and implement a cooperative plan. It is important to note what your program can do for other agencies as well as what services they can provide for your families.

An example of interagency cooperation is Utah's statewide hearing screening program. Hearing screening is often a function of the State Health Agency. In Utah, the Parent-Infant Program initially worked with Utah State Health in the development of a statewide infant screening program. This service was eventually taken over completely by Utah State Health. Children identified as having a hearing loss are automatically referred to the Parent-Infant Program. The State Health Agency provides a screening-diagnostic service and the Parent-Infant Program provides home intervention service.

SUPERVISION

In a program that serves a wide geographic area through itinerant professionals, a systematic supervision program is necessary to insure the optimal operation of the program.

Supervision is done by the full-time parent advisor supervisor. This person should do direct supervision at least fifty percent of the time. The supervisor should have all the necessary requirements for a parent advisor plus direct experience as a parent advisor and training and experience in supervision. It is recommended that the supervisor has a small active case load of families to visit.

Supervision takes place through four main supervising vehicles:

1. Supervision phone calls
2. Supervisory visits with the parent advisor to the homes.
3. Weekly and monthly reports.
4. Periodic staff meetings.

Supervisory phone calls are made to parent advisors every two weeks. Each parent advisor has established a specific time they will be available and ready for the phone call. The supervisor uses a format for the calls. These calls provide support to the parent advisors and provide a regular vehicle for the parent advisor to request information or materials and discuss problems. It also provides the supervisor with continuous updated information on families and parent advisors. A sample phone call format is included at the end of this section.

Supervisory visits are made to new parent advisors twice a month for the first five months, then once a month. The supervisor visits parent advisors with one year's experience monthly and people with two to three years experience are visited every other month. People with over three years experience do not receive regular supervisor visits. The supervisor uses a modified Flanders Interaction Scale and a supervisory check list. The supervisor and the parent advisor hold a conference while they travel to the next home or at the end of the day. A sample supervisory checklist is included at the end of this section.

Reports are sent to the supervisor each week (see reporting under Home Visit Procedures). These reports are summarized on a monthly report. The parent advisor also includes a copy of lesson plans. The parent advisor reports number of visits for pay purposes. These reports provide child assessment data and keep the supervisor knowledgeable concerning child and family progress.

SUPERVISORY PHONE CALLS

Parent Advisor________________ Date Called______________ Time__________

Child________________________ Parents______________________________

CHECK FOLLOWING IF THERE ARE NO PROBLEMS:

H/A____________ Ear Mold___________ Parent Notebook__________ Exp. Book___

Auditory Level________________ Is Progress Being Made?________________

Language Level________________ Is Progress Being Made?________________

Are Parents Attending Parent Group Meetings? Yes_____ No_____ N/A____

PROBLEMS NOTED	DISPOSITION

PROGRAM EVALUATION

Background and Purpose

Evaluation is an integral part of the SKI*HI Model and is based on the notion that management of any educational program requires careful monotoring to determine the extent to which it is being properly implemented. In order to insure this proper implementation it is first necessary that the program be documented in enough detail so that Program staff have specific guide lines for their work. Once this accurate program description is available it is important to systematically collect information about various aspects of the program which can be used by the program director or staff to make management decisions about administering the program. The SKI*HI Model following guidelines suggested by the U.S. Office of Education, Bureau of Education of the Handicapped, has chosen to monitor the following aspects of its program.

1. Child Progress
2. Parent Participation
3. Staff Development
4. General Project Management
5. Demonstration/Dissemination of the model

These areas of evaluation emphasis are discussed in more detail in the following pages.

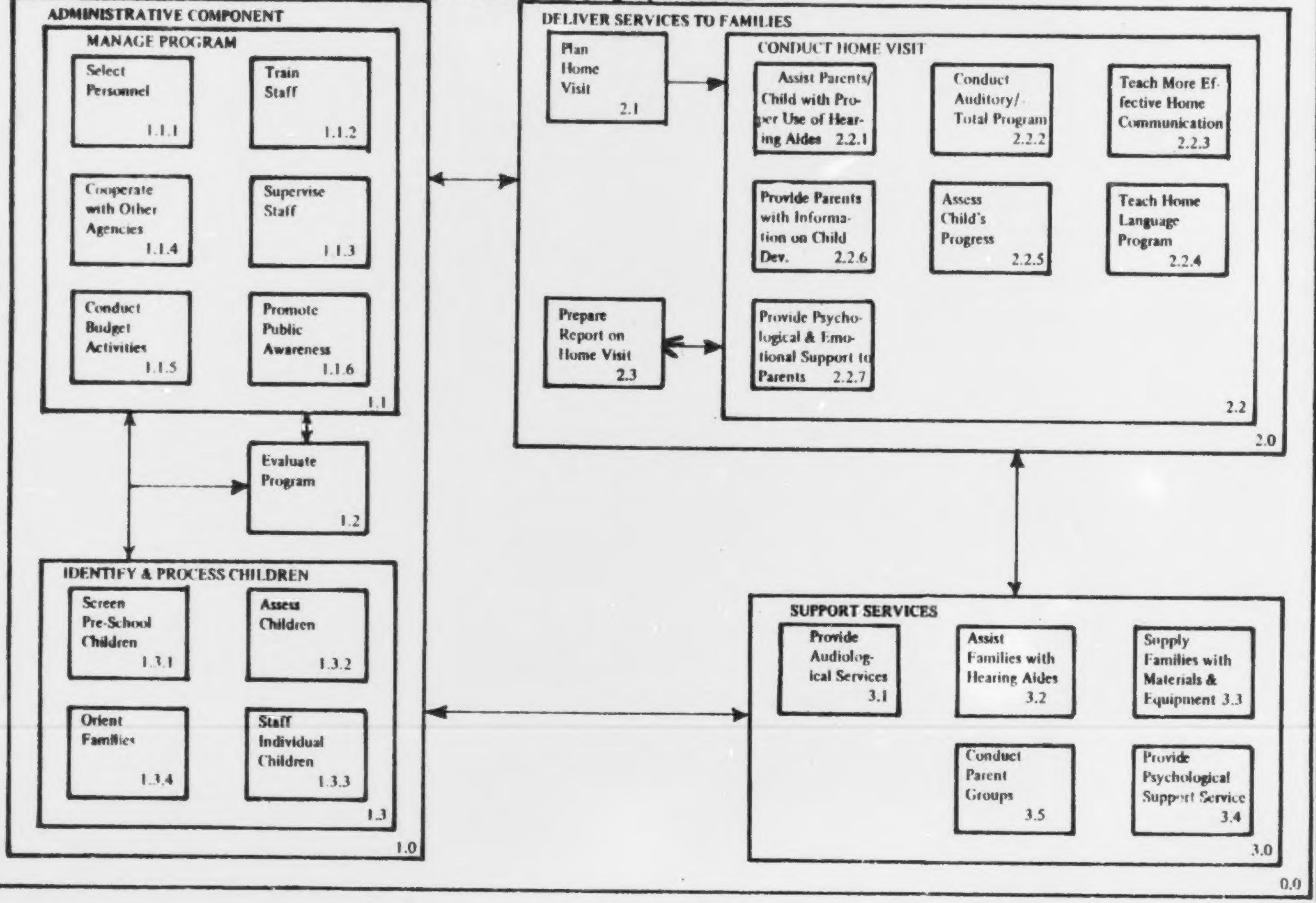
The Evaluation approach employed with the SKI*HI Model is based on Discrepency Evaluation Model developed by the late Malcolm Provus. This approach defines evaluation as a process for collecting decision making information based on discrepencies between what the program intends to do and what it actually does.

This Evaluation Model assumes that it is the role of program management to define the program standards. Management should identify the goals, specify the activities, and detail the resources needed to carry out the planned activities. It is the job of the evaluator to provide information to the manager concerning the integrity to which that standard is being followed. In each of the projects implementing the SKI*HI Model, the standard will be provided along with evaluation design and a systematic data collection plan which is tied directly to various components of the SKI*HI Model. In addition detailed descriptions of how to analyze and report data will be provided. Individual sites will be provided normative data on several of the instruments utilized in the evaluation effort.

Program Standard

The program standard or intent of the program is graphically depicted in Figure 1.

FIGURE 1: THE SKI* HI MODEL: Home Programing for Families of Hearing Impaired Infants


ADMINISTRATIVE COMPONENT
MANAGE PROGRAM
Select Personnel 1.1.1
Train Staff 1.1.2
Cooperate with Other Agencies 1.1.4
Supervise Staff 1.1.3
Conduct Budget Activities 1.1.5
Promote Public Awareness 1.1.6
1.1
Evaluate Program 1.2
IDENTIFY & PROCESS CHILDREN
Screen Pre-School Children 1.3.1
Assess Children 1.3.2
Orient Families 1.3.4
Staff Individual Children 1.3.3
1.3
1.0
DELIVER SERVICES TO FAMILIES
Plan Home Visit 2.1
CONDUCT HOME VISIT
Assist Parents/Child with Proper Use of Hearing Aides 2.2.1
Conduct Auditory/Total Program 2.2.2
Teach More Effective Home Communication 2.2.3
Provide Parents with Information on Child Dev. 2.2.6
Assess Child's Progress 2.2.5
Teach Home Language Program 2.2.4
Prepare Report on Home Visit 2.3
Provide Psychological & Emotional Support to Parents 2.2.7
2.2
2.0
SUPPORT SERVICES
Provide Audiological Services 3.1
Assist Families with Hearing Aides 3.2
Supply Families with Materials & Equipment 3.3
Conduct Parent Groups 3.5
Provide Psychological Support Service 3.4
3.0
0.0

Detailed description of each of the three major components and all of the sub-components can be found in the body of the handbook. The figure serves two important functions in understanding the evaluation process. First it allows the reader to see the total scope of the program at one time while seeing how individual components or subcomponent are interrelated. Second it provides a basis for seeing the relationship between the program and the evaluation.

Evaluation Design

In doing evaluation the most important decision to be made is what information is to be gathered. This decision is especially significant because in most cases only minor resources are allocated to gathering evaluation information. In developing the SKI*HI Evaluation plan several criteria were employed. First, what is the minimum amount of information that is required for a project to insure that the integrity of the model is being maintained. Second and equally important is what is the minimum amount of data required on parents and children to accurately assess their progress in the program. The final criteria eminates from outside reporting sources. Briefly stated it is; what information is required by different funding sources in order that individual projects implementing the model can enjoy continued support? Keeping these criteria in mind and attempting to gather only the bare minimum of information, Table 1 sets forth the evaluation question to be answered along with its relationship to the program. It also describes the instrument on which the data will be collected, schedule of administration, and a brief discussion of how information will be used. Table II depicts the work plan for the evaluation process.

Although consideration was taken in developing the evaluation system to insure that only the bare minimum information was gathered, it is clear that the responsibility for the evaluation must be clearly assigned. In next table an attempt has been made to show what responsibilities are required to answer each question.

TABLE I. Evaluation of the SKI-HI Model

Evaluation Question	Design Reference	Instrument	Administration Schedule	Information Use
Child Data				
1. Have children's auditory ability changed?	Output component 2.2	1a) hearing loss in decibals 1b) auditory scale developed by project (found in the Parent Advisor Weekly Report Form)	a) Administered at the time a child has entered by a licensed audiologist and when the child graduates. b) Administered at the time a child enters and during weekly visits by the parent advisor	a) To determine individual change and overall impact of the model b) To monitor individual growth and to determine over all impact of the model
2. Have children's Receptive Language improved?	Output component 2.2	2a) REEL (Receptive Language Quotient) 2b) SKI HI (A-D) (for children over 24 months) 2c) SKI HI Language Behavorial checklist (for children 24 months or less)	2 a,b) Both Administrated by the parent advisor at the time a child enters the program, at 3 month intervals as necessary. And when the child leaves the program Instructions given by parent, advisor parents administer same frequency as 2b	2 a,b) To determine growth of individual children for staffing purpose and to determine over all effectiveness of program Same as 2a,b
3. Have children's expressive language improved?	Output component 2.2	3a) REEL (Expressive Quotient) b) SKI HI Language Schedule Behavioral checklist c) Vocal Verbal Scale See Home Visit Report Form d) New Vocabulary (Home Visit report form)	3 a,b) Same as 2 a,b 3 c,d) Same as 1b	3a,b Same as 2 a,b 3 c,d) Same as 1b

Evaluation Question	Design Reference	Instrument	Administration Schedule	Information Use
4. How many children have been admitted to program and what are their characteristics?	Output 1.3	4a) Ski Hi Intake Form (see Appendix)	a) Filled out when child is officially admitted in the program by parent advisor	a) Used for describing the characteristics of children being served
Parent Data 5. Does parents attitudes toward deaf children change?	2.26 3.5	5a) Ski Hi Parent Attitude Survey	a) Parent advisor administers survey to parent(s) during first home visit and when child has completed program	a) Information used for judging extent to which parents have more accepting attitudes towards deaf children
6. Do parents learn skills in use of hearing aids, sign language, and better communication skills with their children?	2.26 3.5	6a) Parent Skill Assessment (Included on Weekly Report Form)	a) Parent advisor assess various skill levels in regular home visits	a) Information used for judging extent to which parents are progressing in the program and for over all project effectiveness

Evaluation Question	Design Reference	Instrument	Adminstration Schedule	Information Use
Staff Development 7. Is staff employing the Ski Hi Model properly trained?	Outcome 1.1.2	Ski Hi Staff training Assessment Inventories	Persons employed at the Utah site are responsible for assessing the extent to which all perspective SKI HI implementors are trained to certain criteria. Tests are administered regularly through out the straining session.	Information is used for determining the adequacy of the training and extent to which trainees are prepared to implement the model.
Management 8. What needs for training and assistance do Ski Hi directors have?	1.1	8a) Ski-Hi Design checklist (see Appendix)	8a) Program Staff from the Utah site will periodically interview the local directors using a structured interview based on the Ski-Hi Design checklist	8a) The results from this instrument will help Utah staff plan for additional training and provide an over all index at the extent to which the model is being properly implemented across all local projects.
Demonstration/ Dissemination 9. How many demonstrations/dissemination activities are conducted?	1.1	Logs of people visiting project, materials, disseminated, presentations, workshops and other related activities	9a) Project secretary maintains lists for each different category of activities.	The results show a secondary type of project impact including interest of other locations in Model.

TABLE II Evaluation Workplan

Question	Instrument(s)	Administrators	Schedule of Administration	Scoring	Coding data for key	Data Analysis	Reports pre/post
2,3	a. REEL b. SKI HI (A-d) c. Behavior checklist	Parent Advisor	Every three months starting at entry until graduation	Parent/ Advisor	punching selected by staff member	Consultant or person with computer ability	Summarized yearly
1	a. Hearing test b. auditory scale (Parent Advisor Weekly report)	Professional audiologist Parent Advisor	At entry into the program - at graduation and as needed During weekly visit	Audiologist Parent/Advisor summarizes on monthly report	" "	"	a. pre post differing yearly b. individual monthly reports and pre-post differing yearly
4	SKI HI Intake form	Supervisor or Parent Advisor	At entry into the program	none required	"	"	Description of children served yearly
5	a. SKI HI Parent attitude survey	"	At entry into the program and at graduation	none required	"	"	Pre post differing yearly
6	Parent skill assessment (Parent Advisor weekly report)	Parent Advisor	Weekly	none	"	"	Individual summaries prepared monthly pre post comparisons made yearly

TABLE I

Question	Instrument	Administrators	Schedule of Administration	Scoring	coding data for key	Data Analysis	Reports pre/post
7	SKI HI Training Inventories	Person conducting training	During initial and follow-up training of staff	Training	Not applicable	Not applicable	summary prepared on each inventory immediately following administration.
8	SKI HI Design checklist	SKI HI consultant	As appropriate	SKI HI Consultant	Not applicable	Secretary	Individual project summary used for planning training immediately follow-interview Yearly summary on all projects.
9	Demonstration/ Dissemination Log	Project secretary	As appropriate	NA	NA	NA	Yearly summaries prepared

SKI*HI OUTREACH

Project SKI*HI was able to demonstrate a replicable model and obtain continuation funding. The Project was funded by the Utah State Legislature as a part of the program and budget of the Utah School for the Deaf. Project SKI*HI is now the Utah School for the Deaf Parent-Infant Program and operates basically the same as Project SKI*HI. The state funding allowed continuation of all major components of the program.

Project SKI*HI Outreach operates independently of the demonstration project which is now the Utah Parent-Infant Program. The Outreach Program is housed at Utah State University at Logan. The Utah Parent-Infant Program is used for demonstration, field testing, and practicum by the Outreach Project.

The director of Outreach was the director of Project SKI*HI and all staff of Outreach worked and/or continue to work in the Project SKI*HI Demonstration Project.

Project SKI*HI Outreach functions with the main goal of stimulating and providing training and technical assistance for agencies who want to develop an early childhood parent-home intervention program for the hearing impaired.

Specific Outreach services are briefly described:

A. Dissemination Conferences
A full day dissemination meeting is held on site at the agency interested in development of parent-infant services. This is a six hour meeting which

gives a mediated overview of the major programs of the home intervention program.

B. Assistance in Initial Program Organization and Planning

If the Agency is definitely interested in replicating Project SKI*HI, Outreach provides assistance in development of a grant document and direction in seeking funding. Models of grant documents are provided if requested. Consultants are available if needed.

C. Summer Training Program

For those agencies who obtain funding and are ready to develop a program, there are three summer programs:

(1) Full time personnel from the first year program who will be parent advisors and later supervisors attend a four week summer program at Utah State University. This session provides initial training to provide the participants skills and understanding to implement a home intervention program. Stipends and college credit are given. The local agency chooses the participants.

(2) Administrators from the agencies developing the new program attend a three day conference at Utah State University. This is a comprehensive overview with administrative suggestions and interaction with parents, children and personnel involved in the home intervention program.

(3) Supervisors from relication sites return to Utah State University for an update and mutual sharing.

D. Materials Provided by Outreach

Necessary materials which are available only through Outreach are provided by Outreach with or without charge. These materials include the operational curriculum, manual, slides, audio tapes, tests, etc. Some materials are available at cost while others are provided without charge.

E. On-site Visits

Parent advisor-replicators visit first year programs three times and second year programs twice. These visits are to provide technical assistance, consultation, public relations and direct assistance in program development.

F. Technical Needs Assessment and Agreement

During the first on-site visit, the replicator meets with all the staff. The staff request specific services they need and the replicator assesses the needs of the program. A technical assistance agreement is then made. The Outreach Program will provide those services and materials.

G. Telephone Contact

The replicator assigned to a site, receives reports from the site. She reads these reports and then calls the sites and provides suggestions and answers questions.

H. Externship in the Utah Home Intervention Program

Externships in the Utah Parent Infant Program are available.

I. Evaluation

Two types of evaluation procedures are used.

(1) The replication site is provided with a complete reporting-evaluation system which they can use to evaluate child and parent progress.

(2) The Outreach Program asks the replication site to submit periodic progress reports and replicators make on-site evaluations.

(3) Evaluation services are provided to assist the replication program in its own evaluation.

J. Administrative Assistance

Administrative assistance is given at the summer administrator's session. The director of Project SKI*HI Outreach will also visit the site one time to give technical assistance and direction. Phone calls are made as necessary and appropriate.

K. Assistance in Providing Training for New and Part-time Personnel

It is the goal of Outreach to make the new replication programs completely independent from the Outreach Program. In order to do this, each program must be able to train their own people. After the first year of Outreach, the full time parent advisor should be completely competent in delivery of a home intervention program. Outreach trains a supervisor/trainer to use a mediated training program which will be provided to each program. The local full time parent advisor will then be able to train all new personnel that is necessary.

L. Sequential Time Table Guide for Program Development

Each new program will be given a suggested time table for a two year developmental program. Major components will be in the sequence.

PLANNING THE HOME VISIT

Planning and executing a "lesson plan" for a home visit is challenging. Experience has shown that home visits that are not well planned often become nothing more than a social visit. However, pre-written lesson plans cannot anticipate circumstances in the home when the visit is made. The plan needs to have planned activities and procedures, but at the same time it must allow for events in the home that can be more effective than planned activities. The following is a guideline for preparation for a home visit. These are guidelines and should be tempered with the parent advisor's knowledge of the child and the family. Home parent-child programing allows for complete individualism.

In preparing for a home visit to a family, the parent advisor should:

a) Note the auditory level of the child.
b) Note the receptive and expressive language level of a child.
c) Note the specific levels of parent competence.
d) Check the specific developmental skills on the auditory receptive and expressive language programs that the child should be developing.
e) Check last week lesson plan and challenges.
f) Using the lesson format, write the plan for the home visit keeping in mind each of the above.

Utah School for the Deaf

Home Visit Report

Parent-Infant Program

Child________________________Parent Advisor_____________Parent____________Visit #_______Date_________Type Visit A-B-C

I. ACTIVITIES.

	BEHAVIORAL OBJECTIVES	LEARNING ACTIVITIES	TARGET WORDS & PHRASES	MATERIALS
A.______ 1. P.A. 2. Parent 3. Child				
B.______ 1. P.A. 2. Parent 3. Child				
C.______ 1. P.A. 2. Parent 3. Child				
D.______ 1. P.A. 2. Parent 3. Child				

II. HEARING AIDS. Functional: Yes__No__ Wearing Aids: Yes__No__ Maximum Time___________Down Time___________Time Not Worn___________

III. EARMOLDS. Earmolds_________________ Problems Noted__________________ Disposition_________________

IV. DATA. Parent's Notebook: Yes__No__ Child's Experience Book: Yes__No__ Report on Previous Assignment:Yes__ No__

V. 1. Vocal Verbal: (Circle Highest) 1 2 3 4 5 6 7 8 9
2. Tonal Patterns: All Patterns Used______________________
3. Articulation: New Sounds This Week______________________
4. Language Development:
Prelinguistic: 0-4, 4-6
Receptive: 6-8, 8-12, 12-18, 18-24, 24-36, 36-48, 48-60
Expressive:6-8, 8-12, 12-18, 18-24, 24-36, 36-48, 48-60

8. Facilitating Language Development Under Direction:
(Circle each competency level in each area.)
(A.) 1 2 3 4 5 6 (C.) 1 2 3 4 5 6
(B.) 1 2 3 4 5 6 (D.) 1 2 3 4 5 6

Number of Activity Opportunities:____________
Number of Activities Utilized:______________

5. Stages of Auditory Development: (Circle highest level child response)
1 2 3 4 5 6 7 8 9 Note any new auditory skill__________________
6. Structured Auditory Development: (Stage of Competency) 1 2 3 4 5 6
7. Conducting Auditory Development Independently: No. of Opportunities______________________
No. of Utilizations______________________

(MAKE A WRITTEN REPORT OF HOME VISIT ON THE REVERSE SIDE)

USDB-D 44.1

Parent's Attitude:

Child's Attitude:

Other:

Challenges:

FORMAT FOR A HOME VISIT

(a) The parent advisor should strictly adhere to the meeting time made the previous week by the parents and the parent advisor.

(b) The home visit should be a minimum of fifty (50) minutes and a maximum of sixty (60) minutes.

(c) Use the following home visit procedures:

1. Check the aid as appropriate;
2. Review the model to be used with parents;
3. Place child in maximum auditory-visual situation;
4. Present the model or have the parent use the model;
5. Explain to the parent the purpose of the model. The what and why;
6. Answer questions;
7. Give parent challenges for the next week and plan the components for next week's visit;
8. Rapp session.

Do not make this visit a social call. It is deleterious to the parent advisor - parent relationship for the parent advisor to stay in the home and chat about whatever topic comes up. The parent advisor - parent relationship should be warm and friendly but professional.

The guides for parent advisors should be flexible. They are guidelines, not rules. Such things as length of meeting, content, etc. must be flexible. It is expected that the parent advisor generally stay within the guidelines but use their own good judgment and depart from the guidelines when and where it is deemed necessary.

Involving the Family and the Extended Family

The mother is usually the main significant other in the child's life. In some cases there will be a chief child care giver who is not the mother. These guidelines apply in these cases. The mother spends much more time with the child than the rest of the family. Therefore, the greatest amount of time in the home intervention program is spent with the mother. However, there are other significant "others" in the child's life, and these others should be involved in the home intervention program. The mother is the one who will be naturally involved. It takes considerable effort to involve the others.

Involving father will have to be a deliberately planned event. Few fathers will become naturally involved; however, most fathers will become more involved if the parent advisor has a definite plan to involve him. Parent advisors should plan several visits at a time when the father can be there. As a rule, do not ask the mother to teach the father. Work with the mother and father together on regular home intervention procedures. Plan a few special sessions exclusively for the father and child. Work with the father in special "Dad" activities that he likes to do with the child. Leave challenges for the father.

The siblings often feel left out or neglected because of all the attention and the time the handicapped child receives. When there are young children in the family, they should be included in the activities as much as possible. In many instances, they will be delighted to do the same things the hearing impaired child is doing. For all siblings, both young and old, specific visits should be planned to work with them exclusively. Specific auditory and language activities can be planned to teach the child how to communicate with the hearing impaired brother or sister and how to make the home a more meaningful language environment.

Special activities can be planned to involve others outside the immediate family. Most "others" are eager to learn to communicate with the hearing impaired child and will attend special sessions to learn to do so.

Meeting the Family's Psychological Needs

There is a special section on meeting the family's psychological needs. Every parent advisor should be completely familiar with this and should use the resources and program of the Project when attempting to meet psychological needs.

CHILD ASSESSMENT IN THE HOME AND REPORTING

It is of vital importance that an accurate record of child and parent progress be kept. This information will be used in the future for staffing, making recommendations and evaluations. Further modifications and reevaluations will be made from the data collected to individualize program development and to enhance educational programming that required careful follow-up by appropriate staff members.

The advisor will record after each visit, information pertaining to the hearing aid by checking the following items:

Receiver	cracked
Ear molds	feedback - dirty
Battery.	weak - dead
Operating Controls . . .	setting on M
Cord	connections - broken - frayed
Volume Control	proper setting

The advisor will also note if the child was wearing the aid. If not, she will state why he was not. Data will be recorded on the auditory skills of the child. Did the child respond to any environmental sounds, such as running water, dogs barking, T.V., the vacuum, etc.? Also, did the child hear any vocalization and was he able to localize any sounds?

Information will be obtained pertaining to receptive language. Did the child obey any commands such as "shut the door," "get your coat," "come here," "sit down," etc? The advisor will also record observable expressive language, such as, did he use any new vocabulary words, and what was the frequency of his vocalization.

Another important area to obtain data will be the developmental skills. Does the child use gross and fine motor skills? Can he grasp, let go, or hold objects? Does he follow the normal pattern with adaptive skills such as, sensory motor developments and manipulation besides exploitation of his environment.

The advisor should observe and record his appropriate social behavior. Does he relate well to parents and sibblings? Does he associate with playmates? Does he relate well with them?

All of the above information will be recorded on the weekly home visit report form. The parent advisor should use the following forms to record and report this data.

(a) Home visit report. This report should be completed immediately after each home visit and mailed to the Project office weekly with a duplicate copy kept in the parent advisors log of the child.

(b) Record of hearing aid worn. This data would be kept during the first two or three weeks of hearing aid usage and then probed once every quarter (three months).

(c) Home hearing aid evaluation form. In order to obtain information concerning the left ear vs. the right ear response to sound and the appropriateness of a binaural vs. a monaural fitting, two hearing aid evaluation forms will be used. The first form, (Home Hearing Aid Form For Parents) will be given to the parent at the first home visit after the child has accepted the aid. (3 - 4 hours daily or more) the form

(Record Hearing Aid) will be used until the child accepts the aid. Parents will record data concerning the child's responsivity to the hearing aid. The aid will be alternated to the other ear during the second home visit. Parents will record the child's responsivity with the aid on the second ear. During the third week (if both ears are responding appropriately to amplification) a binaural system will be fitted on the child. Parents will record how the child responds to the system.

The second form (Parent Advisor Home Hearing Aid Evaluation Form) will be kept by the parent advisor after observing the child during the home visit, obtaining language, and speech samples, and doing some environmental sound testing. The parent advisor will record her data concerning the child's responses in the left ear vs. right ear and a binaural vs. monaural fitting.

With these two forms completed, the parent advisor will make an appointment with the mangling audiologist. The managing audiologist will perform hearing aid evaluation. His data along with the hearing aid evaluation forms from the parent and parent advisor will provide necessary information to determine how the individual ears perform an appropriate amplification system for the child.

These same two forms can be used to record data on one hearing aid vs. another. After the managing audiologist and parent advisor have decided on the appropriateness of a binaural or monaural fitting, several different hearing aids will be tried on the child to determine the most appropriate amplification for him.

P.A. HOME H/A EVALUATION FORM--Parent Advisor ____ CHILD ____ H/A ____

Dates ____

Ear ____

Percent of time aid used during waking hours

____ %

Auditory Responsiveness: (Comment on what sounds responded to, rapidity of responses to sounds, frequency of responses to sound).

Alerting: ____

Searching: ____

Localizing: ____

Distance Hearing: ____

Elevation Hearing: ____

Gross Sound Discrimination: ____

Voice Discrimination: ____

Tonal Discrimination: ____

Articulation Discrimination: ____

Vocalizations: (Comment on spontaneous vs imitative, frequency of vocalization, what is vocalized using IPA)

Pre-babbling: (cry, goo, grunt) ____

Babbling: (Repetitive syllables or different)

Single words: ____

Sentence like jargon and/or echolalia: (non-linguistic but similarity to adult speech)

Two-word sentences: ____

Three-word sentences: ____

Transformations: ____

Language: (indicate level of expressive and receptive language: give examples) ____

Tonal patterns:

Appropriateness of loudness: ____

Appropriateness of pitch: ____

Attitude of child: ____

Attitude of parent: ____

Dates ____

Both Ears ____

Percent of time aid used during waking hours

____ %

Auditory Responsiveness: (Comment on what sounds responded to, rapidity of responses to sounds, frequency of responses to sounds).

Alerting: ____

Searching: ____

Localizing: ____

Distance Hearing: ____

Elevation Hearing: ____

Gross Sound Discrimination: ____

Voice Discrimination: ____

Tonal Discrimination: ____

Articulation Discrimination: ____

Vocalizations: (Comment on spontaneous vs imitative, frequency of vocalization, what is vocalized using IPA)

Pre-babbling: (cry, goo, grunt) ____

Babbling: (Repetitive syllables or different)

Single Words: ____

Sentence like jargon and/or echolalia: (non-linguistic but similarity to adult speech)

Two-word sentences: ____

Three-word sentences: ____

Transformations: ____

Language: (indicate level of expressive and receptive language: give examples) ____

Tonal patterns:

Appropriateness of loudness: ____

Appropriateness of pitch: ____

Attitude of child: ____

Attitude of parent: ____

WEEKLY HOME VISIT REPORT

Name ______________________ Parent Advisor ______________________ Visit # ______ Date ____________

1. Hearing Aids

	Yes	No
Functional		
Wearing Aids		

Maximum Time ______________________

Down Time ______________________

Not Wearing Time ______________________

Earmolds: ______________________

Problems Noted: ______________________

____

Disposition: ______________________

____

Parent's Notebook: ______________________

____

Child's Experience Book: ______________________

____

Report on Previous Assignment: ______________________

____

2. Vocal Verbal (Circle Highest)

1, 2, 3, 4, 5, 6, 7, 8, 9

3. New Vocabulary--

New Vocabulary Reported By Parents ______________________

____

New Vocabulary Observed by Parent Advisor ______________________

____

4. Articulation - new sounds this week: ______________________

____

5. Stages of Auditory Development (Circle Highest Level Responded by the Child): 1, 2, 3, 4, 5, 6, 7, 8,
Note any new auditory skill: ______________________

6. a.
   b. Structured Auditory Development (Stage of Competency): 1, 2, 3, 4, 5, 6
   c. Conducting Auditory Development Independently:
      Number of Opportunities: ______________________
      Number of Utilizations: ______________________
   d. Facilitating Language Development Under Direction. Circle appropriate competency level in each language area.
      Language Areas:

A	B
1, 2, 3, 4, 5, 6	1, 2, 3, 4, 5, 6
C	D
1, 2, 3, 4, 5, 6	1, 2, 3, 4, 5, 6

(MAKE WRITTEN REPORT OF HOME VISIT ON REVERSE SIDE)

MONTHLY PARENT ADVISOR EVALUATION FORM

(Due 10th of following month)

Name of child   Name of Parent Advisor __________
Month __________________ Year __________ Date forwarded __________________

Data for this form is derived from observations and questions during the home visits of one month and from study and referral to materials between visits.

Note: See instructions for gathering and reporting date p. _____.

1. Hearing Aid. Underline as appropriate.

   a. Total number of waking hours hearing aid is worn __________.
   b. Total number of waking hours haering aid is not worn __________.
   c. Total number of down time hours __________.
   d. 1 2 3

      yes no yes no yes no

2. Vocal-Verbal Stages of Utterances. (spontaneous, not imitative)
   Check highest level achieved.

   1. vocal--one syllable--limited articulation--cry, coo, grunt, etc. _______
   2. vocal--one syllable--some articulation emerging--pre-babbling. _______
   3. vocal--vocal play or babbling, repetitive syllables, e.g. baba (same) or bado (different). _______
   4. verbal--single word, often functions as sentence, single or double syllable, does not have to be articulated correctly. _______
   5. vocal--jargon, sentence-like, non-linguistic, tonal patterns across many syllables simulative of adult speech--and/or echolalia of it occurs. _______
   6. verbal--two-word sentence, miniaturized language system, pivot open class might be typical but not inclusive, e.g. a car, big car, car broken, not car. _______
   7. verbal--3-4 words, noun phrase (e.g. my big car, no more car, the other big car) or designative, predicative, and verb phrase constructions (e.g. it a car, the car broken, take car again) also telegraphic (e.g. finished went home.) _______

8. verbal--kernal sentences--designative consturtion, predicative contruction, and actor-action sentence--with or without article e.g. there's the car, the car is broken, car is broken, I see a car, I see car. ______

9. transform - emerging transformation--revealed by substitutions of pronouns for noun phrases, use of interrogatives, employment of and to join series of words--affirmative, negative, and imperative constructions--complex sentences generated by rules of addition, deletion, permutation, and substitution within or among kernal sentences. ______

3. Vocabulary Development as reported by parent.

1.
2.
3.
4.
5.
6.
7.
8.

New Vocabulary Observed by Parent Advisor

1.
2.
3.
4.
5.
6.
7.
8.

4. Articulations within utterances. Circle symbols for articulations which have been used by the child from the time of the first home visit. Accumulate total. ___/41

h p t k f θ s ʃ tʃ w b d g v ð z ʒ dʒ m n ŋ l r j u
ʊ o a ʌ ə ɝ ɚ i ɪ e ɛ æ aɪ aʊ ɔɪ ju

5. Stages of auditory development. Check the highest level achieved.

1. REFLEXIVE - Child responds reflexively to sounds: more response, startle, cessation of activity, widening of the eyes, increase in activity, crying.

2. ALERTING TO SOUNDS - Child knows a sound is present but does not know its source. Child may respond by pointing to the ear, facial expression, searching for the sound, etc.

3. LOCATING THE SOUND SOURCE - Child can locate the sound source. The child may turn to the sound source (localize), run to the sound source, etc.

4. DISTANCE HEARING - Child hears sound at varying distances. He may localize to the sound, find the sound, run to the sound, etc.

5. LEVELS OF HEARING - Child hears sound above and below him. He may turn to the sound, go to the sound sources, etc.

6. AUDITORY PHASE II - Gross Environmental Discrimination - Child can associate the sound with its source. He may respond by pointing to the source of the sound (without seeing the sound source when the sound is presented) imitating the sound, using the sound source correctly.

7. AUDITORY PHASE III - Gross Vocal Discrimination -
   a) onomatopoeia sounds
   b) functional words with strong prosody patterns

   Child can made prosodic discriminations. He can associate the sound with source (toot-toot with train). He knows the nature of the sound and will imitate it. He knows the function of the sound. (When he hears "no no" that means to stop.)

8. AUDITORY PHASE IV - Fine Speech Discrimination -
   a) vowels
   b) consonants

   Child can make phonemic discriminations. He indicates this discrimination by:

   a) imitation
   b) pointing to correct picture or item after hearing word
   c) responding correctly to the word

6. Program competencies of parents. Underline level of competence with:

   a. Management of hearing aid: Maintaining, checking, trouble shooting, number of weeks to reach 100% competency ________, or Competency level reached if longer than ten weeks ____________.

   b. Structuring auditory development activities under direction: Auditory stage ________.

   c. Conducting auditory development activities independently (own initiative): Number of opportunities ____________. Number of opportunities utilized __________.

   d. Facilitating language development under direction: No, Minimal, Considerable, Substantial, Very Substantial, Complete.

Evaluation for Total Communication

This form is to be completed on all total communication children and families in addition to the regular monthly report. There is one exception. For total communication children it will not be necessary to fill in the vocal-verbal section on the monthly report.

The Child

I. Gathering Data: Parent advisor will observe the consistent expressive and receptive language skills of the child during the sessions. Parents will observe and note language skills during the week and record in the parent notebook. If the parent advisor's observations are different from the parent's, the parent advisor will record the highest of the two language levels on her weekly reporting form.

II. Recording Data: Parent advisor notes on the weekly reporting form under "language" the child's expressive and receptive levels. At the end of each month, the parent advisor notes the highest level attained during the month and indicates on the monthly total communication reporting form.

1. Spontaneous expressive language: (Check highest level attained)

One word without voice ____
One word with voice ____
Jargon without voice ____
Jargon with voice ____

Two words without voice ____
Two words with voice ____
Three words with voice ____

2. Receptive language (child responds with appropriate behavior):

One word commands ____
Two word commands ____

Three-four word commands ____
Four-five word commends ____

The Parents

I. Gathering Data: Parent advisor determines what lessons mother (or significant parent) completes at 80-100% competency by inquiring after parent views the lesson for one week. If 80-100% competency is not achieved, parent views lesson another week.

II. Recording Data: Lessons completed at 80-100% level are noted on the weekly form under "report on previous assignment". All lessons completed by end of the month are noted on monthly report.

Check lessons completed at 80-100% competency levels during the past month:

A. Instructional ____
- Manual Alphabet ____
- To-be Verbs/ Pronouns ____
- Affixes/ Question Words ____

B. Activity Lessons ____
- Changing Diaper ____
- Going to Bed ____
- Going to the Bathroom ____
- Getting Dressed ____
- Getting a Drink ____
- Mealtime ____
- Cooking ____
- Washing Dishes ____
- Washing Clothes ____
- Sewing ____
- Cleaning House ____
- Going Shopping ____
- Gardening ____
- Child Hurts Himself ____
- Girl Playing Outside ____
- Boy Playing Outside ____
- Girl Playing Inside ____
- Boy Playing Inside ____
- Puppets ____
- Counting, coloring, cutting ____
- Follow the Leader ____
- Story Telling (Opposites) ____

C. Subject Lessons:
- Playthings ____
- Prepositions ____
- Sports ____
- Body Parts ____
- Clothing ____
- Holidays ____
- Medical ____
- Money ____
- Work, Job, Professions ____
- Animals Part I ____
- Animals Part II ____
- Food Part I ____
- Food Part II ____
- Related Food ____
- Household Items ____
- People ____
- Places and Directions ____
- Time ____
- Religion ____
- Outdoors ____
- Elements and Tools ____
- Measures, Numbers, and sizes ____
- Transportation and Motion ____

Feelings and Emotions I	____	Verbs I (Strong Action)	____
Feelings and Emotions II	____	Verbs II (Minimal Action)	____
Sounds	____	Verbs III (minimal Action)	____
School	____		
Adjectives, Adverbs, and connectors	____		

I. Gathering Data: Parent advisor observes parent at sessions and notes immediately after session on weekly form (narrative).

II. Recording Data: Parent advisor records highest level obtained by parent during the month as indicated on weekly reports.

Check Highest Level

Parents use consistently (75% or more of their utterances to the child):

One word (sign) in naming, simple commands, etc. ____

Two word sentences signed completely (including tenses, affixes) ____

Three-four word sendtences signed completely (including tenses, affixes) ____

Four-five word sentences signed completely (including tenses, affixes) ____

I. Gathering Data: Parent advisor observes and makes comments in body of weekly report. Comments on subjective.

II. Recording Data: Parent advisor makes judgment based on best performance as indicated in weekly reports.

Check appropriate ability level on parent's fluency (speed, smoothness of signs, continuity of signing).

excellent ____ very good ____ good ____ fair ____ poor ____

very poor ____

Instructions for Monthly Report

1. Hearing Aid

   I. General instructions for gathering data.

      A. Each week Parent Advisor asks the parent three questions:

         1. Total number of waking hours* hearing aid is worn.
         2. Total number of waking hours hearing aid is not worn.
         3. Total number of down time** hours.

      *This is based on the assumption that all children are awake a total of 12 hours per day. Items 1, 2, 3 should equal 360 hours per a 30 day month.

      **Refers to time aid is inoperable. (Broken or being repaired.)

      B. Record this information on weekly evaluation forms.

      C. Total this weekly data.

      D. (New Item) Child's management of his/her own aid.

         Each week the Parent ADvisor should ask parents these questions:

         1. Does child put his/her hearing aid on by self?
         2. Does child adjust aid to proper volume setting?
         3. Does the child indicate to parent when aid is not working?

   II. Specific instructions for recording data on monthly report form.

      A. Scratch out item "A" and write in the total number of waking hours the hearing aid is worn for the month.

      B. Scratch out item "B" and write in the total number of waking hours hearing aid is not worn for the month.

      C. Scratch out item "C" and write in the total number of down time hours for the month.

      D. On the monthly report form, under item "C", write 1, 2, & 3. Next to these numbers, record the last weekly visit responses to the questions asked regarding child's management of his/her aid. Answer with a yes/no response.

2. Vocal-Verbal Stages of Utterances

   I. General instructions for gathering data:

      A. Each week the Parent Advisor observes and notes the highest level used. In addition, the Parent Advisor asks the parent to report what she has observed between visits. If there is a difference between what the Parent Advisor and the parent would record, discuss and resolve it. Leave a tape recorder with the parent if necessary to help resolve any differences.

      B. Record the highest level achieved during a given week on your weekly evaluation form.

   II. Specific instructions for recording data on monthly report form.

      A. Take the highest level reached on the weekly reports and record on the monthly form.

      B. Check only one level on the present monthly form.

3. Vocabulary Development This Month

   I. General instructions for gathering data:

      A. Count as a new word a morpheme that is recognizable as a word but it does not have to be articulated correctly.

      B. Ask the parents to record in their notebook all new words the child uses each week. The child should use the word several times associated with the same object or event.

      C. Record on the weekly report all words reported by the parent under "New Vocabulary report by parents". Report all new words observed by the Parent Advisor.

   II. Specific instructions for recording data on monthly report forms. Compile all new words recorded on weekly report on the monthly report.

   Note: When appropriate confirm words reported by parents by asking recreating the situation where the child will say the word.

4. Articulations Within Utterances

I. General Instructions for gathering data:

A. For children presently being reported:

1. During each weekly home visit, add only the new sounds observed by Parent Advisor and parent.
Special Note: If the parent has observed a sound that you have not, listen for it and substantiate first existence in the vocalizations and/or verbalizations of the child. Take the parent's word for it in the meantime, unless you have no confidence in the parent's observations.

2. Record this on your weekly report.

B. For children admitted to SKI*HI Project after March 1st.

1. Record all sounds heard during the first home visit on weekly reports.

2. Ask parents if any other sounds have been heard and record on weekly report.

3. For subsequent visits, record only new sounds on weekly reports.

II. Specific instructions for recording data on monthly report form.

A. For children presently being reported:

1. Circle only new sounds that have been recorded for the month on the monthly report.

B. For children accepted into SKI*HI Project after March 1st.

1. Circle all sounds observed during the first visit and subsequent visits for the first month.

2. After the first reported month, circle only new sounds that have been observed.

5. Stages of Auditory Development

I. General instructions for gathering data.

A. The Parent Advisor should record on weekly report the highest state of auditory development the child has achieved or definitely responding.

II. Specific instructions for recording data on monthly report form.

A. Summarize your weekly reports.

B. Check (✓) the stage at which the child has responded to for three consecutive weeks. If the child moves through a new stage each week, then check (✓) the highest level achieved.

6. Program Competencies of Parents

1. Management of Hearing Aid.

A. General instructions for gathering data.

1. Administer criteria-based evaluation to all parents who have completed the home hearing aid program.

2. For new parents going through the home hearing aid program, record on the weekly evaluation form when the parent scores 100% criterion. If by the tenth visit, the parent has not reached this criterion, record the percentage of items he has achieved. Record this on the weekly evaluation form for the tenth visit.

B. Specific instructions for recording data on monthly report form.

1. Circle the competency level the parent has achieved on the criteria-based evaluation.

* 100% = Complete
80% = Very Substantial
60% = Substantial
40% = Considerable
20% = Minimal
0% = None

Report this item (No. 7, A, 1) for those parents who have completed the home hearing aid program on your February Report only. Do not report this data again.

*These percentages correspond with the scoring criterion presently used on the monthly report.

2. For new parents going through the home hearing aid program (7, A), report the length of time taken to achieve 100% or the level achieved at the end of ten weeks.

II. Structuring auditory development activities under direction.

A. General instructions for gathering data.

1. Parent Advisor determines, on weekly visit, the stage on which the parent is working related to the auditory development of their child.

B. Specific instructions for recording data on the monthly report form.

1. Immediately after the last visit of the month, write on the monthly evaluation form, on the right-hand margin, the stage of auditory development at which you have been working on with the parent. (See example)

Example: Structuring auditory development activities under direction: Localization Stage.

2. Circle, on monthly form, the level of competence the parent has achieved, at the stage indicated, for the month.

Special Note: When a parent reaches complete competence on the stage they have been working, they will remain on that stage until their child also moves to a new stage of auditory development.

III. Conduction auditory development activities independently (own initiative).

A. General instructions for gathering data.

Special note: This competency is a measure of how well the parent, interacting independently with their child, utilizes the number of auditory opportunities or activities, observed by the Parent Advisor record, during the weekly visits, whether or not the parent is seizing upon these opportunities for the appropriate auditory development of their child. During all visits the Parent Advisor must be the judge as to whether or not a given opportunity was present for the parent to utilize. The measure sought is a ratio of the number of opportunities utilized to the number of opportunities available.

1. The Parent Advisor should record on the weekly visit form two new headings: Number of opportunities and Number of opportunities utilized. (See example.)

   Example:

	1st Visit	2nd visit	3rd visit	4th visit	Total
Number of opportunities:	5	3	6	7	21
Number of utilizations:	3	2	5	4	14

2. Total both columns at the end of the month.

B. Specific instructions for recording data on the monthly report form.

1. Parent Advisor adds up the weekly totals and records this total on the right-hand margin of the monthly report. (See example.)

   Example: Conduct auditory development activities independently (own initiative): 14/21.

   Note: Disregard the past method of recording for item 7

IV. Facilitating language development under direction:

A. General instructions for gathering data:

Special Note: This competency centers around the utilization of common activities, by both the child and parents, for language growth during the weekly visits of the Parent Advisor. Specifically, it involves using target phrases, maximum auditory input, visual clues, and the desired frequency of verbal expression.

PARENT'S NOTEBOOK

Introduction

Objectives:

1. To provide a means whereby the parents may monitor and record their child's growth and development.

2. To assist the Parent Advisor in identifying the needs of the parents in relation to their child.

3. To help the Parent Advisor informally evaluate the program.

Description:

Every parent will be provided with a looseleaf notebook. This notebook will remain the personal property of the parent. Parents will be encouraged to record in the notebook the child's receptive and expressive language development and aspects of child growth and development. The notations may be made daily or periodically.

This information will allow the parents to review the progress made by the child, will serve as a support to other parents beginning their observations of their younger children, and provide vital data to project personnel.

The notebook is divided into sections and will include language development, auditory skills, growth and development patterns, parents weekly challenges and information from the Project.

Training:

The Parent Advisor will provide an orientation and training for the parents on how to use the notebook. Samples of skills and developmental information will be provided to serve as a guide for the parents. The notebook will serve as a means of training parents in utilizing a more systematic approach to observing and teaching their child.

Section 1
Weekly Challenges

Objective:

Parents will be given a specific assignment each week which will be designed to support the language development and stimulate listening skills of their child.

These tasks will be "challenges" to the parents and will be recorded in Section One of the Parent Notebook.

The parent and advisor can plan together and build continuously from one week to the next.

Section 2
Personal Information

Objective:

Parents will record personal information about their child for easy access for use by parent and parent advisor. This section will include such information as birth record, description at birth, hearing impairment, date enrolled in Project SKI*HI , etc.

Section 3
Language Development

Objective:

This section provides a systematic approach for parents to record daily or periodically the receptive and expressive language development of their child. To assist parents in becoming more familiar with receptive and expressive language skills, a sample page of each is provided in the notebook.

Section 4
Auditory Skills

Objective:

Auditory stimulation and listening skills are recorded in this section. Section Four contains auditory stimulation and listening skills. Parents record date, place and brief description of the child's behavior as he begins to listen. The parent will record these auditory behaviors under appropriate headings of the hierarchy of skills as developed in the Project Auditory Program.

Section 5
Growth and Development Guide

Objective:

Parents are asked to check the developmental guide every third month. The parent is to note any areas of development the child is not performing on age level. The parent advisor will discuss the child's development with the parent and together plan and execute enrichment activities to develop the skills.

Section 6
Child's Experience Book

Objectives:

1. To provide a means whereby the child's personal experiences can be recorded and illustrated.

2. To stimulate the child's language development from personal experiences.

BIRTH RECORD

Mother's Name____

Father's Name____

Time I was born______________________

Doctor's Name____

Hospital_________________________ City____________________

State______________________ Zip_____________________

DESCRIPTION AT BIRTH

Color of eyes__________________

Color of hair__________________

Weight - lbs.________ ounces____

Height________________

Birthmarks_____________________

Hearing Impairment Discovered__________________
Date

Section II

PERSONAL INFORMATION

Name ______________________________

Birthdate _________________________

Date enrolled in Project SKI*HI:

____

Project SKI*HI

State Wide Infant Program for Hearing Impaired

846 Twentieth Street

Ogden, UT 84401

Phone: 399-2702

Parent Advisor

HOME HEARING AID EVALUATION FOR PARENTS -- Hearing Aid __________ Child __________ P.A. __________

	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
Ear ______ Percent of time (waking hours) aid used							
What sounds did the child respond to, how did he respond, how often did he respond.							
What vocalizations did the child make; how often							
Attitude and opinions of parents, attitude of child.							
Ear ______ Percent of time (waking hours) aid used							
What sounds did the child respond to, how did he respond, how often did he respond.							
What vocalizations did the child make; how often							
Attitude and opinions of parents, attitude of child.							
Both ears ______ Percent of time (waking hours) aid used.							
What sounds did the child respond to, how did he respond, how often did he respond.							
What vocalizations did the child make; how often							
Attitude and opinions of parents, attitude of child.							

RECORD HEARING AID WORN

Time of Day	Week I: Date ____________ Amount of time hearing aid is worn							Week II: Date ____________ Amount of time hearing aid is worn							Week III: Date ____________ Amount of time hearing aid is worn						
	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S
7:00																					
7:30																					
8:00																					
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10:30																					

Comments: ____

____

____

____

____

✓ When aid was worn.

✱ Asked for aid or pointed or indicated in some way that he wanted to wear the aid.

X When he refused to wear the aid.

HEARING AID EVALUATION FORM

Name ____________________

Hearing Aid: ____________________

Date Obtained: ____________________

Length of Time Aid Worn: ____________________

Child's Responses: ____________________

Hearing Aid: ____________________

Date Obtained: ____________________

Length of Time Aid Worn: ____________________

Child's Responses: ____________________

Hearing Aid: ____________________

Date Obtained: ____________________

Length of Time Aid Worn: ____________________

Child's Responses: ____________________

Hearing Aid: ____________________

Date Obtained: ____________________

Length of Time Aid Worn: ____________________

Child's Responses: ____________________

Section III

LANGUAGE DEVELOPMENT

Date	Place	Receptive	Expressive
January 10	Home (kitchen)	Carried out directions Put the ball on the floor	Bye-bye, Cookie, Water
January 15	In the car		Laughed out loud

Section IV

HEARING AID AND AUDITORY SKILLS

Directions for Use

This section of the parent notebook is to be used in conjunction with the Home Hearing Aid Program and the Home Auditory Program.

Two forms are provided for recording data in conjunction with the Home Hearing Aid Program:

Record of Hearing Aid Worn. This form is to be used during the first three weeks of hearing aid usuage. If the parent advisor deems it necessary, the parent may be asked to keep data for a longer period. The parent will be asked to make periodic checks of time the hearing aid is worn. See pp. 30, 59.

Home Hearing Aid Evaluation for Parents. This form is to be used to help project personnel in selecting the optimum aid for the child. The parent advisor will direct the parent to keep the data at specific times. The parent advisor will check this data on her next visit. The form itself is self-explanatory. (See p. 33.)

A form to be used in connection with the Home Auditory Program is included. This form is to be used to record the child's auditory behavior. The parent is asked to record the date, place, and auditory level (as stated in the Auditory Program), and the auditory behavior the child demonstrated. Blank forms and an example of data desired are included.

Section IV

HEARING AID AND AUDITORY SKILLS

Date	Place	Description of Auditory Action
January 17	Home	Stage 1- Stopped playing with toes.
January 18	Home	Stage 2- Looked for mother at sound of her voice.

Section IV

HEARING AID AND AUDITORY SKILLS

Date	Place	Description of Auditory Action

Section V

DEVELOPMENTAL GROWTH

A developmental guide is provided for the parents. This guide is developed into four sections:

Birth to nine months

Twelve to twenty-four months

Two and one half years to twelve years

Bibliography

The birth to nine months section first gives a general description of the child's development at a specific month under the following headings: appearance; physical, motor capacities; sensory development; needs; and social. Then the same month of development is divided into skills: Motor, Adaptive, Behavior, and Social skills.

The twelve months to twenty-four months section has only the following: appearance, motor skills, adaptive, behavior, and social.

The two and one half years section has general developmental characteristics given every six months.

The bibliography is a listing of references and readings in child development.

This entire Developmental Growth Guide was prepared by Project SKI*HI Early Childhood Consultant. It represents a compilation of developmental skills taken from sources in the bibliography.

This is not a developmental testing scale (see evaluation for the developmental testing scale). Its purpose is for a reference for parents. Parents of handicapped children are often overly concerned about the child's development. The child may be normal in every area but a specific area effected by the handicap. It is important that parents know what normal development is so they will not be concerned in areas where the child is not behind developmentally but will be aware of areas where the child is indeed behind.

The parents are asked to check the developmental skills for the age of their child every six months and record only specific areas where they feel their child is behind in normal development. A form is provided at the end of the scale for the parents to record this information. The parents, parent advisor, and psychologist will then discuss the areas where the child is behind and plan an appropriate program for that child.

NEWBORN

Appearance

- Average weight - 7 pounds
- Average length - 20 inches
- Head - 1/4 of his length
- Neck - all but visible
- Legs - 1/3 of his length
  - Feet bent in at the ankles, almost parallel
- Face - features small, chinless appearance
- Head may be misshapen from the journey through the birth canal
  - Usually disappears within a week or two.
- May have some fetal hair still present
- Skin may still have vernix caseosa apparent. This is a protective covering
  - Chalky when dry
- May be jaundiced
- Eye and skin pigment a bit slow in developing
- Skull fontanels (soft spots) are conspicuous - may not close until 1 1/2 years
- Genitals somewhat large and prominent
- Cheeks have a layer of fat - plays an important part in sucking
- Nerve centers present, although not fully developed
- Neonate's jaw holds two sets of buds for two sets of teeth
- Newborn girls ovaries contain what is thought to be a lifetime's supply of rudinertory ova
- Newborns feel different when you hold them
  - Some cuddly - cozy
  - Some sprawl loosely
  - Some are tense, light in spite of their weight
  - Some squirm

Individual
Difference
In
Behavior

Physical, motor capacities

- He can kick
- He can grasp a finger
- He can cry
- He can wave his arms
- He can suck
- He can scratch
- He can evidence the following reflexes
  - Planter response (Babinski reflex) - when bottom of foot is stroked from sole to heel the toes fan out and up, instead of curling under normally as they do later on.
  - Pupils of the eyes contract to light
  - Salivates when something is placed in his mouth
  - Moro or startle reflex
  - Sucking response
  - Grasping reflex
  - Swimming reflex
  - Stepping or walking reflex
  - Blinks
- He can yawn
- He can hiccough
- He can vomit
- He can sneeze
- He cannot shed tears - tear ducts do not begin to function until one month
- He cannot perspire - sweat glands do not begin to function until one month

Sensory capacities
- He can hear well and may be startled by certain sounds
- He can follow a moving light with his eyes
- He responds to being touched
- He can smell
- He can taste
- He responds to changes in temperature (if too warm, doesn't eat as well)
- He responds to discomfort of body position
- He looks in the direction of sounds
- Turns head to follow a moving object
- Sense of balance is present and developing

The newborn cannot
- Shed tears - tear ducts begin to function at about 4 weeks
- Perspire - sweat glands begin to function at about 4 weeks
  - Therefore, parents must be sensitive to temperature changes in order to help the child to be more comfortable.

Needs of the newborn
- 20 hours of sleep each day
- Affectionate, warm, loving care
- His early feelings should be satisfaction and pleasurable comfort rather than discomfort
- The tense, anxious feelings of the parent are communicated through the parent's body and manner of caring for the child. If the parent can be relaxed, at ease when she handles the baby, the baby usually responds positively, seeming more relaxed, content, and comfortable.

This is a transitional period from pre-natal to post-natal existence.

NEWBORN

Appearance	Motor Skills	Adaptive	Behavior	Social
Average weight 7 pounds Average length 20 inches Head - 1/4 of length Neck - all but visible Legs - 1/3 of length Feet - bent in at ankles, soles almost parallel Face - features small - chinless Head may be misshapen - usually disappears within a week or two May still have some fetal hair Skin may have some vernix caseosa apparent May be jaundiced Eye and skin pigment slow in developing Skull fontenals (soft spots) are conspicuous may not close until 1 1/2 years Genitals somewhat large and prominent	Can kick Can grasp a finger Can wave his arms Can scratch More reflex Babinski or planter reflex Sucking response Swimming reflex Stepping reflex Can sneeze Can vomit Can hiccough Can yawn Cannot shed tears Cannot control temperature through perspiration	Grasping reflex Moro reflex Sucking reflex Can cry Pupils of the eye contract to light Salivates when something is put in his mouth Blinks Turns toward a sound Can sneeze Can yawn Can vomit Can hiccough Can hear well Can follow a moving light with his eyes Responds to being touched Can smell Can taste Responds to changes in temperature (if too warm he doesn't eat as well) Responds to discomfort Sense of balance is present and developing Must adapt to: temperature change from wet to dry must ingest his own food from dark to light	Sleeps 20 hrs per day Startles easily sometimes jerks in his sleep Can nurse - bottle or breast Responds to touch and being held -seems relaxed -seems content -seems comfortable Yawns Hiccoughs Cries Focuses sounds or a moving light Kicks Waves his arms	Responds to touch and being held -relaxed -comfortable -content Cries Focuses on moving face or hands

ONE MONTH

Appearance
- Knees flexed - wide apart
- Muscle tone has improved
- Wakes more decisively - opens his eyes widely - and does not drop into a shallow, ambiguous drowsing.
- Sleeps more definitely
- Tends to have a preferred position - head turned toward the preferred side, with the arm on that side extended (in the prone it will be flexed upward) perhaps an indication of later handedness

Physical, motor capacities
- The heart has steadied its pace
- Breathes with regularity
- Body temperature no longer erratic
- Responds with motor tightening when picked up
- May smile at a moving face
  - Smile before 2 weeks - 0%
  - Smile by the end of 3 weeks - 11%
  - Smile by the end of 4 weeks - 49%
  - Smile by the end of 5 weeks - 21%
  - Smile by the end of 6 weeks - 19%
- He can cry vigorously
- He can now shed tears (tear ducts don't begin to function until about this time)
- He can now perspire (sweat glands don't begin to function until about this time)
- Arches his back and flails about when hungry

Sensory development
- Regards his mother's face occasionally, briefly
- Vocalizes - small throaty sounds
- Reacts negatively to pain
- Crying stops at the sight of the mother or when others approach to pick him up
- If bottle fed, reacts to anything white as if it were the bottle

Needs
- Give of your time
- Keep him warm
- Keep him dry
- Keep him well fed
- Still takes two or more night feedings
- When feeding, be sure the head is slightly elevated. Children who are fed lying flat tend to have more ear infections (80% have ear infections. Only 8% of the children who are held with the head slightly higher than the body have ear infections. Propped bottles or breast feeding lying flat should be "out.")

This month has been a transitional period from pre-natal to post-natal existence.

ONE MONTH

Motor Skills	Adaptive	Behavior	Social	Family
Equal movement both arms, both legs	Heart has steadied its pace	Responds with motor tightening when picked up	Smiles	
Lifts head in prone position	Breathes with regularity	Cries vigorously	Regards his mother's face	
Tonic neck reflex	Temperature no longer erratic	Reacts to pain and discomfort	Vocalizes - small throaty sounds	
Smiles 0-2 weeks - 0% by end of 3 weeks - 11% by end of 4 weeks - 49% by end of 5 weeks - 21% by end of 6 weeks - 19%	Can now shed tears Can now smile If bottle fed, reacts to anything white as if it were the bottle	Takes 2 or more night feedings	Crying stops when mother or others approach to pick him up	

TWO MONTHS

Appearance

- Between the fourth and tenth weeks a rash may appear on the face that comes and goes spontaneously (tiny pimples with white centers). Sometimes occurs when child is too hot or crying. Leave it alone. It usually disappears at eight to ten weeks. Don't oil it.
- Watches the mobile, the curtain blowing in the breeze
- Sucks his fingers
- Stares at people who approach
  - Open mouthed
  - Wide eyed
- Attempts to hold up his somewhat wobbly head
- Lifts his head when in the prone position
- The smile activates the entire body - arms and legs
- "Whole body" involvements and activity
- May not like his bath

Physical, motor capacities

- Systems of the body have stabilized, a leveling off period
- Reaches out to bat at a dangling object, but does not yet open his hand to grasp. This is the beginning of the transition from a passive absorption of the environment to active response to the environment - explorative-manipulative response.
- Finger sucking is normal (fist sometimes)
- May begin to sleep through the night (this frequently happens at about 11 pounds)
- Pushes hands against the crib when in the prone (on the stomach)
- Pushes feet against bottom of the crib when in the prone
- Actions and movements smoother every day
- Awake for perhaps 10 hours a day by the end of second month
- Arms and legs move a great deal when excited

Sensory

- Blinks when something approaches him
- Struggles and works his mouth to talk when someone talks to him
- Tracking bright, jingling objects for about a 100° arc
- When he hears a voice, he turns to it quickly
  - Is particularly aware of the mother's voice

Needs

- Baby is now more a member of the family. Father and mother are more rested, more relaxed
- Fathers do better with the night bottle. If breast fed, they smell the mother and tend not to be enthusiastic if she offers a night bottle
- Be sure the head is slightly elevated when feeding (see one month "needs" for discussion of ear infections)
- Some doctors recommend the beginning of cereal now. Check with your pediatrician
- Careful choice of a baby sitter
- Play with the child

Social

Calm and happy for a day or two, then on the third and fourth day, he may cry and fuss - chin may quiver, arms and legs tremble

Awake for as much as ten hours

Responds to vocalizations and attention with smiles and kicking and arm movement

TWO MONTHS

Appearance	Motor Skills	Adaptive	Behavior	Social
Smile activates the entire body May have a rash on face - comes and goes spontaneously. Don't oil it; it will go away by about 8-10 weeks. Needs Be sure the head is slightly elevated when feeding (see one month notes on ear infections) Play with the child Respond to his vocalizations Choose baby-sitter carefully	Whole body involvement & active Kicks Waves arms Tries to hold up his wobbly head Lifts his head when in prone position Systems of the body have stabilized--a leveling off period Reaches out to bat at a dangling object but does not yet open his hand to grasp Pushes hands against crib when in the prone position Pushes feet against bottom of crib when in the prone Actions and movements are smoother every day	May not like his bath May sleep through the night (this frequently happens at about 11 lbs) Awake for perhaps 9 or 10 hours a day by the end of the second month Blinks when something approaches him Struggles and works his mouth when someone talks to him Can track a bright, jingling object for about a 100° arc When he hears a voice he turns toward it--particularly the mother's voice Now, the baby is more a member of the family--everyone is more relaxed	Sucks his fingers--it is normal Watches a mobile or curtains blowing in the breeze Whole body involvement & active May suck his fist Excitement results in much kicking and waving of arms	Stares at people who approach -wide eyed -open mouthed Smile activates his entire body -arms -legs Fathers do better with the night bottle Calm and happy for a day or two, then on third and fourth day he may cry and fuss, his chin may quiver, his arms & legs may tremble

THREE MONTHS

Appearance
- Alert
- Attentive
- Active
- Responsive to environmental stimuli
- Occupies himself continually
- Searches the environment for stimulation
- His expressions of delight and glee are somewhat predictive of such expressions throughout his life
- Smiles in response to stimuli
- Entire face brightens up when he recognizes the stimulation
- There is an increase of activity with recognition of the stimulus
- He vocalizes when he recognizes the stimulus
- He orients himself to whatever he regards as if to ask "What is it?"

This is a transition point
- He has lost the neonatal look
- Rounded, full face and body

Physical, motor capacities
- When his hands close on an object, he looks to the object
- When in the prone he moves his head freely and looks
- Reaches out to bat at dangling objects
- Eye-lens accommodation (adjustment) permits the eyes to converge on an approaching object
- Colic usually leaves about this time
- Usually sleeps through the night until 5 o'clock, 6 or 7 o'clock
- Kicks, wiggles, reaches outward with glee and delight when father or mother approach him and smile
- When put down to sleep he engages in a kind of nestling into the bed clothes, trying to find a comfortable place
- Plays with his hands
- May discover his feet during this third month
- Holds his head up easily without bobbing.

Sensory
- A time of intense visual activity
  - Eyes move freely and often
  - Fixates on one object after another
  - Upon being picked up he looks - this is his first activity - to look around him
  - With his eyes alone he is "picking up" the environment
  - Intense visual regard - accompanied by cessation of physical activity
  - Intense visual scrutiny
  - Intense visual exploration
  - Searching, interested glance
  - Any change in the environment arouses his visual regard or scrutiny
  - Enjoys looking at a mobile
  - Listens for sounds and noises
  - Can track an object in a 180° arc now

Needs

- Enjoys colorful, bright, shiny objects
- Enjoys novel, complex patterns
- He needs the security of a schedule
- He needs to be played with
- By the end of the third month, he may be ready for solid food (cereal, or whatever the doctor recommends). Offer only one food challenge at a time. Then the parent can assess the response with greater accuracy.
- May enjoy a rattle for a moment or two (holding it when it is handed to him, then dropping it).
- Enjoys a cribside toy
- He needs activities with the father, too

Social

- Loves a mild rough-house
- Smiles at "pretend" anger
- Shrieks of dismay at real anger
- Reacts differently to familiar people (smiles and gurgles) and to strangers (solemn, watchful, reserved stare).
- Sometimes wants to play if he awakens in the night. This usually goes away.
- Reacts to bedtime, sometimes wants the socializing to continue
- Loves to play "Boo."
- Socially responds to the mother's or father's approach to him in vocal or smiling exchange. He kicks, wiggles, reaches his hands outward in delight, and excitement. It is a total body response at seeing a smiling face.
- Amazes himself with his own vocalizations
- Crying activity seems to lessen
- He can wait for an expected feeding, perhaps whimpering a bit, watchful and anxious, but not crying.
- He may interrupt a feeding to smile and play a bit.

THREE MONTHS

Appearance

- Alert
- Attentive
- Active
- Responsive to environmental stimuli
- Has lost the neonatal look
- Rounded full face and body

Needs

- Enjoys bright, shiny, colorful objects
- Enjoys novel, complex patterns
- He needs the security of a schedule
- He may enjoy a rattle for a moment or two--holding it when it is handed to him then dropping it
- Enjoys cribside toy
- FATHER ACTIVITIES are very special and very important

Motor Skills

- When his hands close on an object, he looks at the object
- When in the prone, he moves his head freely
- Reaches out to bat at dangling objects
- Eye-lens accomodation permit the eyes to converge on an approaching object
- Kicks, wiggles, reaches outward when father or mother approach him and smile
- Plays with his fingers and hands
- May discover his feet by the end of the third month
- Holds his head up easily without bobbing

Adaptive

- Responsive to environmental stimuli
- Occupies himself continually
- Searches the environment for stimuli
- He orients himself to whatever he regards or looks at as if to say "What is it?"
- Colic usually leaves about this time
- Usually sleeps through the night until 5, 6, or 7 o'clock
- When put down to sleep he engages in a kind of nestling into the bed clothes trying to find a comfortable place
- A time in intense visual activity
  - -eyes move freely and often
  - -fixates on one object after another
  - -upon being picked up he looks - this is his first activity
  - -to look around him
  - -intense visual exploration

Behavior

- His expressions of delight and glee are somewhat predictive of such expressions throughout his life
- Increased activity upon recognition of stimuli
- Can track an object for 180° arc now
- Amazes himself with his own vocalizations
- Crying activity seems to lessen
- He can wait for an expected feeding, perhaps whimpering a bit, watchful and anxious, but not crying.

Social

- Smiles in response to stimuli
- His entire face lights up when he recognizes the stimulation
- Vocalizes when he recognizes the stimulation
- Loves a mild rough-house
- Smiles at "pretend" anger
- Reacts differently to familiar people (smiles & gurgles) and to strangers (solemn and watchful and reserved stare
- Sometimes wants to play if he awakes during the night
- May not want to go to bed--not want to leave the delightful activities of the family
- Loves to play "Boo."
- He may interrupt a feeding to smile and play a bit

SIX MONTHS

Appearance

- Mobile and active
- Much involved in everything that happens
- Curious
- Explorative
- Anticipates routine activities
- Involved in his world
- Between 6-7 months he will sit in a Buddha like pose as he plays with an object

Physical, motor capacities

- He can grasp, hold on, manipulate, transfer objects from one hand to the other, and let go of an object
- He can roll over
- May try to sit alone
- Can sit for longer periods
- Eats three meals a day, now
- "Stepping" reflex returns
- Cuts the two lower incisors at about this time
- Eats easily from the spoon when fed. He reaches out, opens his mouth in anticipation and takes the food off with his lips and tongue
- When on the floor or in the play pen he goes to extreme physical exertion to reach or get to what he wants to grasp or play with, twisting, rolling, stretching
- When sitting up, the child may make a triangular brace with his legs and feet to prop and support himself in this position.
- Sways and bounces to music
- Some children (a few) can pull themselves along on their stomachs - backward first, then later on he goes forward.

Sensory - motor or adaptive

- Whatever he picks up goes in his mouth, he mouths, tastes, sucks on things
- Loves looking at the world around him
- Likes and dislikes for foods appear
- Inspects the far side of things, now, turning an object around and around
- Upon hearing music, the child may sway and bounce in his chair or on the floor or in the play pen
- Loves a music box
- Visually alert
- Listens, discriminates a wide variety of sounds

Needs

- Teething toys, safe objects he can mouth and chew on
- Crib side toys, toys tied to the play pen, jump chair or high chair
- Play with him
- He loves "Peek-a-boo"
- Needs music
- Brightly colored objects to play with
- Begin to read to him (very simple books at first)
- A "sound box"
- Take him for walks and brief visits

Social

He may be shy with strangers. This is very normal, and merely means that he can really tell the difference between people he knows very well, and those he doesn't know. This is basic social development. The shyness, when ever it occurs, at six months or later, will go away a bit later on.

He may hold out his arms to be picked up

He enjoys the play pen, or a bounce chair now, and will play with the toys that are tied to it.

He can release, drop things. This becomes the developmental game of "drop and retrieve" between parent and child. First he learns to grasp, then he learns to "let go." If the parent will put the toys back up and go along with the game, this stage will pass and the child will move along to other developmental activities.

He loves to babble away in chattering conversational fashion

Vocalizations may begin to take on the sound of "da-da" or "ma-ma-mam"

If he hears another child cry, he may cry

SIX MONTHS

Appearance	Motor Skills	Adaptive	Behavior	Social
Mobile Active Curious Explorative Much involved in everything that happens Anticipates routine activities Cuts two lower incisors at about this time Needs Teething toys, safe objects he can mouth and chew on Crib side toys, toys tied to the jump chair, play pen, or high chair Play with him He loves "Peek-a-boo" He needs music He needs brightly colored objects to play with Begin to read to him from simple books Provide a "sound box" Take him for brief visits and walks	Between six & seven months he may sit in a Buddha-like pose as he plays with an object He can grasp, hold on to, & manipulate & transfer objects from one hand to another, and can let go of an object He can roll over He may try to sit alone Can sit for longer periods if he is sitting up "Stepping" reflex returns Sways and bounces to music A very few children can pull themselves along their stomachs backward first then later on forward	Anticipates routine activities Involved in his world Eats easily from the spoon when fed. He reaches out, opens his mouth in anticipation and takes the food off with his lips and tongue When on the floor or in the playpen he goes to extreme physical exertion to reach or get to what he wants to grasp or play with twisting, rolling, stretching When sitting up the child may make a triangular brace with his legs and feet to prop & support himself in this position Whatever he picks up goes in his mouth He loves looking at the world around him Likes and dislikes for food appear & disappear Inspects the far-side of things now turning an object around and around Loves a music box Visually alert May exhibit stranger anxiety	Eats three meals a day He can release, drop things now. This becomes the developmental game of "drop and retrieve" between parent & child. First he learns to grasp and then let go. If the parent will go along with the game & put the toys back up, this stage will pass & the child will move along to other developmental activities He loves to babble away in chattering conversation fashion Vocalizations may begin to take on the sound of "Da-da or "ma-ma" If he hears another child cry, he may begin to cry	May be shy with strangers. Some children exhibit this at six months, others exhibit later on. This is very normal, & merely means that he can really tell the difference between people he knows very well and those he doesn't know. This is basic social development. The shyness, when it occurs at six months will go away a bit later on He may hold out his arms to be picked up He enjoys the playpen or a bounce chair now and will play with toys that are tied to it

NINE MONTHS

Appearance
- He has more hair
- Face is beginning to lose its baby look

Physical, motor capacities
- Physical growth slows down a bit
- Practices
  - Sitting
  - He may be crawling - he may crawl rapidly
  - May pull himself up
- One nap a day
- Bathed in the big tub
  - Stay with him (don't answer telephone or doorbell when the child is in the tub or on the bathinette for diaper change. Too many accidents have happened this way).
- Can sit alone indefinitely - plays with things while he's sitting
- Can get to the prone from the sitting psoition
- Can get up on his hands and knees
- The pincer grasp is now prevalent (thumb and forefinger) and he picks up everything
  - And it all goes in his mouth

Sensory
- Orally samples of everything
- Feels and picks up his whole world through the pincer grasp
- Provide a "sound box"
- Provide a "texture box"
- Provide music

Needs
- Vary the bath (toys, containers that are safe to pour from)
- A variety of objects to play with (pots, pans, spools, cups, spoons--wooden)
- Loves to drop things in to a container (spools into a coffee can)
- Play with him with nested cans

Social
- Scoldings and "no-no" are useless
- Loves to hear the laughter of parents
- Imitates family members
- Loves and is responsive to "bye-bye" and "pat-a-cake"
- Smiles at friends and strangers alike
- Says "dada," "Mama," "bye-bye."
- Responds to gestures, facial expressions, sounds

NINE MONTHS

Appearance	Motor Skills	Adaptive	Behavior	Social
Has more hair Has lost the "baby look" **Needs** Provide a "texture book" Provide a "sound box" Provide music Vary the bath -safe toys -safe containers to pour from Provide a variety of objects to play with (pots, pans, spools, cups, spoons--wooden He loves to drop things into a container Provide nested cans and boxes (Out of this type of play come knowledge of such concepts as: in, out, next to, in front of, etc.	Physical growth slows down a bit He practices sitting up He may be crawling--some may be crawling rapidly He may pull himself up Can sit alone indefinitely Plays with things while he's sitting Can get to the prone position from sitting position Can get up on his hands and knees Pincer grasp is now prevalent (thumb and forefinger). He picks up everything, & it goes in his mouth after inspection	Orally samples of everything Feels and picks up his whole world with the thumb and forefinger "pincer grasp	One nap a day Bathed in the big tub now. Stay with him when he is in water. Don't answer the doorbell or telephone when the child is in the tub or being diapered on a high surface	Scoldings "no-no" are useless. Pick him up & move him, substituting whatever he has had to give up or be removed from Loves to hear the laughter of parents Imitates family members Loves, and is responsive to "bye-bye" "Pat-a-cake" Smiles at friends and strangers alike Says "dada," "mama," "bye-bye" Responds to gestures facial expressions, sounds

TWELVE MONTHS

Appearance	Motor Skills	Adaptive	Behavior	Social
Rate of growth is slowing down May have six teeth Has more hair now Has filled out May have tripled his birth weight	Loves to roll a ball back and forth His increased motor activity may interfere with the mother household routine Has perfected & skillfully uses the pincer grasp He can drink from a cup Likes to bang on pan lids He crawls skillfully He may cruise along upright-side stepping as he holds on to a piece of furniture He may begin to walk. Walking usually occurs between 8-20 months He pokes at things He may take simple things apart (but cannot put them back together) Loves to crawl on an incline He can open simple latches Turns on radio or TV May be able to fit pierced blocks on a peg May be able to put a spoonful of food in his mouth-upside down to begin with, but he will learn if you let him practice	May want to stand when being fed Cooperates in dressing May use a stick to retrieve something Sensory exploration centered around mouth exploration Handles everything as he picks up an object he visually focuses upon it & inspects it He listens for clues that are familiar His passive language (nonspeaking language--what he understands) is expanding He may begin to repeat what you say He lets you know what he wants He turns things right-side up He can recognize familiar objects in a picture He knows himself in a mirror if he has had previous mirror play He can put an object inside of another object. He enjoys "putting in" "taking out" games. These are parent child games. He learns such concepts as in, out over, under, in front of, behind next to, & usually understands them	Can crayon simple strokes Explores every where & every thing Everything goes in his mouth Serene Confident May want to stand when being fed Hides and retrieves things Loves music Loves to watch passing cars, people May say "Dada" "Mama," but do not demand of him that he say "Dada" or "Mama" Pulls at plugs and wires Probes electrical plugs (cover them somehow) Bangs, drops, throws, handles, lifts, bites, sucks, touches, explores everything	Friendly Enjoys receiving and can also return warm hugs--also gives wet, open mouthed kisses. Lets you know what he wants He may repeat words you use Serene Confident Loves an audience repeats a performance when laughed at Enjoys peek-a-boo Loves to be chased when crawling by someone else who is crawling Responds to facial expressions and gestures & sounds He can heed "no-no" now Vocalizes some what freely now

FIFTEEN MONTHS

Appearance	Motor Skills	Adaptive	Behavior	Social
Legs spread apart when standing or walking Legs appear short Needs Needs to be kept away from living room if it houses fragile, precious objects	May walk well, starts and stops well, good control May climb stairs on hands and knees Hurls a ball or a bean bag - loves to throw things-will shout for you to bring them back Still loves to bang on pots & pans Pushes objects, pulls objects, tugs, lugs things often with an object under each arm May pluck cloths from table Opens and closes doors, drawers Claps blocks together Falls down a great deal May try to jump Bounces and sways to music	Loves to watch interesting thing going on Moods are shifting--temper is quickly aroused but short-lived He can be diverted easily Can build a tower of 2 or 3 blocks Explores everything - seizes, waves things about to sample of weight and sound potential Puts things into a container, one after another Still perfecting concepts of over, under, in, out, next to, behind, in front of, etc.	This is a dart, fling, dash stage Gets into everything He loves to set things in motion SEE OTHER AREAS, ALL OF THESE OVERLAP	Indicates wants by pointing - some vocalizing Can express emotions very completely--fear, anger, pain, affection, aversion, (turning away), happiness May begin to react sharply when separated from the parents One-way behavior not give and take "no-no" means nothing now Father is more and more important It is largely a matter of adults having sufficient energy to keep up with him.

EIGHTEEN MONTHS

Appearance	Motor Skills	Adaptive	Behavior	Social
	Walks skillfully Trots - runs Can jump Pivots on one foot Dances to music Climbs onto adult chair or couch Seats himself on a small chair - a magnificent ritual Enjoys a simple crayoning Uses a spoon well now May take off his clothes now Begins "dumping activities Gets down stairs now walks down holding on or bumps down them sitting down, or goes down backwards with hands in the step above Can screw bottle caps back on Squats down to explore things	Loves his food He is beginning to use language now He is sensitive to color - is sensitive to shapes. He can play matching games with colors and shapes Piles three or four blocks now May have a vocabulary of ten words May name things in pictures Can identify several of own body parts Loves to unwrap presents Loves to look inside to see what is in a box etc. May follow simple directions "You will need to shut the door," "Thank you," "Bring your book and we will read a story." Let him know how well he does things. May be able to combine two words now DON'T DEMAND SPEECH, STIMULATE IT. Language emerges out of experiences He is trying to master space now -climbing -running -jumping -bouncing	Loves games Bold when hanging on to the parent Great variety of individual behavior--bold, timid, rough, gentle, darting, smooth actions, clumsy, graceful In new situations cautious watchful looking, listening close contact with parent--then a hectic round of impulsive exploration Still loves to set his world in motion Treats people like objects Loves the opposite of what you ask "No" may be his favorite expression He cannot wait. NOW is the only thing that has meaning. If you have to move him, pick him up. Don't call him He has quiet moments He does not intellectually understand "two-ness" He is confused if he sees another child with a toy like his own. He thinks it is his even if he is carrying his own.	May begin to refuse demands, commands, requests, offers for help Beginnings of negativism Lets you know what he wants or doesn't want He takes instead of gives May cling to the mother, cry when she leaves Mother is all important -follows her around -tries to help her Does not respond well to strangers -may not go to them -will not stay with them

TWO YEARS

Appearance	Motor Skills	Adaptive	Behavior	Social
	Tries to dress himself Can walk backwards Can turn corners without falling Can put pegs in a big peg board Surer muscular coordination	Begins fantasy play now - takes care of a dolly, "goes to the store" Begins to use I, me, you May have a vocabulary of 20-50 wds May use three word sentences. Uses language more effectively Can match colors and shapes if he has had experience in doing so He begins to realize there are places he may not go, things he may not touch, hold, or take apart He begins to realize that there are things he is expected to do He likes to look at pictures - feels them, pats them Loves sand & water -dumping -pouring -filling -tipping	Imitates adult behavior -sweeps -dusts -phones -shaves -reads the newspaper He seems more grown up than he is He can "wait a minute" now	Tries to please others some of the time Begins to reach out to play with others, now Added maturity Better organization and equilibrium than at 18 months or later at 2 1/2 years Responsive to others Can be loving and affectionate

TWO AND ONE-HALF YEARS

Warning - a breaking-up time, a peak age of disequilibrium

Rigid and inflexible

Wants what he wants when he wants it

He cannot adapt

Everything must go as he wants it

Sets up rigid sequences of events which must follow each other in exactly the same manner

He is domineering

He is demanding

Violent emotions

Goes from one extreme to another - "I will," "I won't," "Go out," "Stay in."

Streamline all routines - make the decisions, don't ask the 2 1/2 year old. Avoid situations where the child takes over.

Wants to go on and on with whatever he is doing -
    No new things - same stories, same clothes, same furniture
    Holds to old when new things are added

All in his direction -
    Vigorous
    Energetic
    Enthusiastic

Loves to Resist

TWO TO TWO AND ONE-HALF YEARS

Curious

Active - peak of activity

Restless - you can't keep up with them

Fast muscular growth - dash-dart-fling stage

Knees apart, tummy out, waddles, turning corners difficult

Falls easily - center of gravity low, short legs

Peak of being demanding, domineering

Likes to give orders

Violent fluctuation in emotions

Ritualistic - likes to do the same thing in the same way

An asocial being - disconnected, unaware of society, lacks social graces

Cannot share, cannot take turns

As many peace producers, friction smoothers as possible

Determined to have their own way

Decisions hard to make

Major problem is release - trouble releasing on toilet, accustoming to toileting
  Difficulty in releasing objects
  Difficulty going to sleep
  Center of brain is coming alive, child sees himself as separate and apart and he hates to be alone. Go sit with him. A little afraid of the dark. See diagram)

Attention span short - this is relative thing

Needs to be managed rather than disciplined

Reasoning leaves much to be desired - just don't trust him, you really can't tell if he'll remember. Supervise him closely. They cannot see the consequences of their own acts. The gentle touch.

THREE YEARS - Second year of autonomy

LOVES TO CONFORM

Can say, "Yes"

Can give as well as take

Likes to share

Co-operative

Easy-going

"In balance" with people and the things around him

No longer needs the protection of rituals - can vary ways of doing things

Feels secure

He can do it "your way" with pleasure

Can give up a toy

Enjoys people and their good graces

Increased motor ability

Language facility increased - loves to exchange with others, enjoys conversation

Out-going

Pleased with himself

Delightful stage

Greater self-control

Settles his own disputes somewhat - average fight, 30 seconds, one every 5 minutes

Simple choices

Goes to sleep better, but he has nightmares

Fantasy and reality confused

Child's parents' expectations too high

THREE AND ONE-HALF YEARS

Disequilibrium

Insecure

Incoordination - in all fields of behavior - stuttering

Stumbles - falls - fears heights

Possible hand tremor

Possible crossing of the eyes

"Can't see"

Nail biting

Suck his thumb excessively, tics, etc.

Difficult relationships with people

Whines

"Don't look" - "Don't talk" - "Don't laugh"

Jealous of attention given to others

Wants exclusive attention

Needs extra affection and understanding

FOUR YEARS

Out of bounds in every direction

He hits

He kicks

He throws stones

He breaks things

He runs away

Loud, silly laughter

Fits of rage - "You make me so MAD."

Shocking, out-of-bounds language

Profanity, bathroom, elimination words heard now - dwells on them - rhymes them

Defies parental demands

Toughness - swaggers, boasts, defies

Imagination out-of-bounds - companions - make believe

Tall tales - fact and fiction fine line - his imaginings become real

Parent must set limits - be firm

3 1/2 - insecure

4 brash - confident - too sure

Must be allowed to test himself - neighbors whom he can visit - who will notify mother as to his where-abouts

Needs to be allowed to run ahead and wait at next street corner

Reins need to be brought up sharply on occasion

FOUR AND ONE-HALF YEARS

Beginning to bring himself out of the four-year-old behavior

Life more matter of fact -- not so deep

Trying to sort out what is real and what is un-real

"Is it real"

A bit more self-motivated

Stay on the track better

Less need for adult control

Loves to discuss - wealth of material to draw on prompted by intellectual, philosophical sort of interest

Interested in details - like to be shown

Realism often too stark for adults, too frank

Play is less wild

Better able to accept frustrations

Fine motor control better

Interested in letters and numbers

Sees several sides

A "catching-up" time

Possibly a time of rapid intellectual growth

FIVE YEARS

Delight

Equilibrium

Reliable

Stable

Well-adjusted

Secure - within himself

Calm

Friendly

Not too demanding in his relationships with others

Capable

Lives with here and now

Reaches for what he can accomplish, therefore, accomplishes what he tries

Mother, the center - enjoys her instructions, seeks her permission

Satisfied with himself - therefore, others satisfied with him

When the 5 1/2 to 6 break-up comes parents often wish the 5-year-old back

But, by six he needs to branch out - often thrusts himself into all kinds of directions, often causing a good deal of difficulty for all concerned. That is the difficulty of six.

SIX YEARS - Tumultuous

Equilibrium breaks up

Negative:

Thrusting out

Trying new things

Wanting too much

Others are difficult because his own demands are so strong

Difficult to deal with

Violently emotional - opposite extremes, loves one moment and hates the next

Mother no longer the center - gets blamed

He is the center or wants to be

Wants to come first - to be loved best, to have the most

Much goes wrong, demands are strong and rigid

Things must be just so

Cannot adapt - others must adapt

Extremely negative in response to others

A request is sufficient reason for refusal

Boisterous

Aggressive

Positive:

Vigor

Energy

Ready for anything new - almost anything - prodigious appetite for the new

This all leads him to:
- Wanting all of anything
- Choosing between two alternatives is difficult - he wants both
- He has to be right

SIX YEARS (Continued - Page 2)

He has to be praised

He has to win

Criticism is difficult

Blame is difficult

Punishment is difficult

Things have to go his way

Others must give in to him

If he is winning all is well, if he is losing tears, accusations, cheating

If all goes well he can be:
- Warm
- Enthusiastic
- Eager for anything

If things go badly:
- Tears
- Tantrums

But - physical condition

Better muscular coordination

Evidences of growth
- Physical
- Emotional
- Intellectual
- Social

Health more robust

Random activity channeled into specific drives

He can catch a ball

He can handle scissors easily

He is curious - Why? How? What does this say?

He can listen better

He can speak more distinctly

Ready for the skills that school offers him

SIX YEARS (Continued - Page 3)

Physical:

Growth proceeding more slowly

Large muscles better developed than small ones

Eleven to twelve hours of sleep needed

Eyes not yet mature - tendency toward being far-sighted

Permanent teeth beginning to appear

Heart in a period of rapid growth

High level of activity - can stay still for only short periods

Characteristic Behavior:

Eager to learn, exuberant, restless, over-active, easily fatigues

Self assertive, aggressive, wants to be first, less cooperative than at five, keenly competitive, boastful

Whole body involved in whatever he does

Inconsistent in level of maturity evidenced - regresses when tired, often less mature at home than with outsiders

Inept at activities using small muscles

Has difficulty making decisions

Examples of involving a child in helping - crying

Section VI

CHILD'S EXPERIENCE BOOK

Objectives:

1. To provide a means whereby the child's personal experiences can be recorded and illustrated.
2. To stimulate the child's language development from personal experiences.

Description:

Every parent will be given a scrapbook (12 1/2 X 13") and a bottle of Elmer's Glue as they are encouraged to develop a book of the child's experiences he has had at home. These may include such experiences as obtaining a new puppy or having a birthday party. These may be drawn with stick figures or appropriate magazine pictures cut out and pasted in the book. A sentence (or two) may be printed below the picture.

Children may enjoy helping to paste the pictures and color the drawings. They may also enjoy reading and "talking" about their experiences. The book may elicit conversation and the parent may be proud to show it to other parents and visitors.

Additional pages may be added for extra color, texture, or movable parts. The experience book should contain pictures of familiar relatives, close friends, etc., and their names.

Training:

Parent Advisor will orient the parents on how to use the book for maximum language development of their child.

CHILD'S EXPERIENCE BOOK

Page 1 will be a picture of their child. It will be drawn while the child watches and language developed during procedure. Parent Advisor will show the parent how, or will demonstrate for her this activity.

This is Jody.
See Jody.
Jody's eyes are blue.

Page 2 could be a picture of Jody's family, her house, car, etc.

Each additional page can be something that Jody experiences. It can be animals and animal sounds she can make, food she likes to eat, friends and noises, etc.

The book elicits conversation and can be shown to new parents.

HOME HEARING AID PROGRAM

Introduction

New parents in the program know little if anything about hearing aids. They do not know how hearing aids work, how to care for them or how to operate them. The parent advisor goes into the home and teaches the parents what the hearing aid is and how to manage it. Personal contact in the relaxed atmosphere of the home allows the parent advisor to monitor the parent's progress in learning these hearing aid skills and give immediate feedback. The parent advisor also provides instructional lessons on related topics such as the nature of sound, the importance of hearing for language development, hearing assessment, causes and types of hearing losses.

In order for the parent advisor to effectively present the home hearing aid lessons, it is essential for her to be thoroughly familiar with the lesson content. She should not read the lessons in the home. It may be helpful for the parent advisor to make an outline of the lesson content so she can be sure she includes all important concepts.

The home hearing aid program consists of nine lessons. Each lesson consists of objectives, materials, and evaluation. The first three are given prior to the hearing aid fitting. The remaining six are given after the fitting. Lessons 1, 2, 3, and 7 are informational lessons. Lessons 4, 5, 6, 8 and 9 are skill lessons. In lessons 1, 2, 3 and 7 the parents learn information and then describe that information back to the parent advisor. In lessons 4, 5, 6, 8 and 9, parents learn and demonstrate skills.

The materials indicated in each lesson are important to use. The parent advisor should make sure she has assembled all materials before making her home visit.

The following lessons are in the home hearing aid program:

Lesson 1: Hearing for Language; Sound
Lesson 2: Anatomy of the Ear; Causes and Types of Hearing Losses
Lesson 3: Measuring Hearing Losses; Preparation for Fitting
Lesson 4: Parts and Functions of the Aids; Selecting the Best Aids; Putting on the Aids
Lesson 5: Daily Listening Check; Downs' Approach
Lesson 6: Care of the Hearing Aid and Trouble Shooting for Feedback Source
Lesson 7: "Maintaining Child's Hearing Aid - The Role of Parents" - Downs
Lesson 8: Review
Lesson 9: "Sound Approach; Changing Sounds; Competency Test"

The parent advisor may wish to keep copies of the hearing aid lessons for distribution as needed. If she determines that a parent could benefit from having a copy of a lesson in the home for reference, she can then followup her discussion of the lesson by leaving a copy in the home.

Two commercially available booklets also might prove useful in informing parents about hearing aids:

"Your Child's Hearing Aid"
Dormac Inc.
Box 1622
Lake Oswego, Oregon 97034

"Caring for a Child's Hearing Aid"
Zenith Hearing Instrument Corp.
6501 West Grand Ave.
Chicago, Illinois 60635

Goals of the Home Hearing Aid Program

1. All children will be properly fit with hearing aids.
2. The child will accept the hearing aid within the first few weeks after the fitting.
3. The parents will demonstrate to the parent advisor understanding of all the concepts in the hearing aid lessons which include the daily listening check, trouble shooting for feedback and caring for the hearing aid.

Communication Pre-Assessment and Discussion Conducted During the Home Hearing Aid Program

The SKI-HI Communication Program begins during the time that the first home hearing aid lessons are being given. The parent andvisor makes a pre-assessment of parent-child interaction. Then, during subsequent visits, the parent advisor should present 5-10 minute discussions on the importance of mother-child interaction. See the Communication Program Description in this manual for a detailed explanation of the pre-assessment procedure.

LESSON 1

HEARING FOR LANGUAGE; SOUND

Objectives:

1. Parents will describe the three reasons why sound is so important.
2. Parents will explain how sound is made.
3. Parents will explain how sound travels through the air.
4. Parents will define frequency, hertz, and dB.

Materials:

1. Flip chart
2. Pencil
3. Marbles, q-tips, shiny metal-ball gismo, etc. to show motion of air molecules
4. Piano, pitch pipe, or other instrument (can use voice to show middle C and octave).

Lesson:

(A) In __________ (number) weeks (days) we will be putting a hearing aid on ______________________ (child's name). The hearing aid is very important because it will help to bring sound to _______________ (child's name). Let's talk about how important that sound will be for _____________________________ (Child's name). Suppoe you were very young like _____________________________ (child's name) and did not know any words and suppose there was no sound to hear these words. Let's pretend there is no sound (I will not use my voice). See how much you can understand. (Drop voice and say a few words or sentences in a foreign language or use nonsense words.)

What did you understand? (Response: Nothing.) You see, when a child does not know a language (the words) it is very hard to understand what is being said, but it is even more difficult if there is no sound. So sound is important to help
______________________ learn words (language). We all learned
(child's name)
language by hearing it. We heard the word "cat" again and again and finally we learned that the word "cat" is the same thing as the animal that crawls around on four legs.

So sound is important to learn our language, but it is also very important for other reasons:

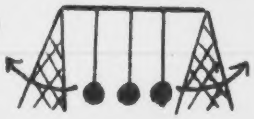
(1) Sound makes us feel part of the world. We hear cars passing, children shouting, telephone ringing, and we feel part of our world. If the hearing aid only helps ____________________
(child's name)
in this way, it will be enough. The expense and effort of putting on the hearing aid will be worth it.

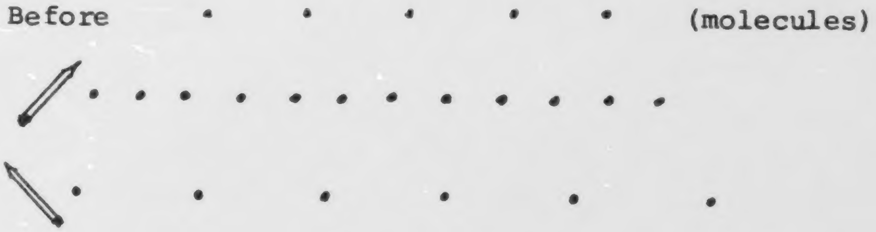
(2) Sound warns us and helps us to know how to act. If something falls back of us, we can turn and pick it up. If a car honks, we can get out of the way. If mother shouts, we come running (or we run the other way).

The hearing aid will help bring sound to ________________.
(child's name)
Let's talk a little more about sound so you will know exactly what it is.

(B) Sound

There are two things you must have to have sound. You must have something moving back and forth (demonstrate pencil moving, demonstrate rubber band being plucked, mention violin string, vocal cords) and you must have something for the sound to travel through (air). Let me show you how sound is made and how it travels through the air. First, we have something moving back and forth (Figure 1, flip chart; move pencil again). As the pencil moves this way (demonstrate)

it pushes on the molecules of air so that this molecule pushes this molecule (point to imaginary molecules). It is like dominoes. (Show Figure 2 in flip chart--draw illustration or use marbles in a line, one pushing against the other; or use q-tips held in hand, one tip pushes the other; or use the metal ball gismo  or use family members lined up, one moving into the next; one molecule hits the next one and so on down the line). Now as the pencil moves this way there is more room here for the molecule. The molecules spread out (draw).



As the pencil moves back and forth rapidly, the air molecules move together, then spread out. You may want to use a real slinky to show how the compressed rings, which represent air molecules pushed together, move through the air or you may refer to Figure 3 in the flipchart. Another way to illustrate how sound travels is to use an air sack. Blow air in plastic bag. Have the parent advisor talk on one side of the bag and and the person on the other side feel the sack move. Explain that the air molecules in the sack are moving together and apart and are moving the plastic on the other side back and forth.

So all sound really is is something moving back and forth (rubber band, violin string) and as that thing moves forward it pushes on air molecules and the molecules squeeze together. As it moves back, the molecules spread out.

When the pencil moves back and forth (demonstrate) one time, we call that one cycle (refer to Figure 4 in the flipchart). If it moves back and forth ten times it would be ten cycles. Let's suppose I could move this pencil back and forth 250 times in one second (try to demonstrate), that would be 250 cycles per second. What do you think you could hear? (Answer: You would hear middle C - plunk on piano or use pitch pipe or other instrument.) Another name for cycles per second is Hertz. So if I move this pencil 250 times in one second that would be 250 Hz (middle C). How fast I move this pencil determines how high or low the sound will be. If I move it very slowly, 125 times in one second, you would hear a low sound (octave below middle C). If I move it very rapidly (500 times in one second), you would hear a very high sound (one octave above middle C). How high or low a sound is is called pitch (may want to also use frequency). Sound can be high and low and it can also be loud and soft.

dB is used to tell us how loud a sound is. If a sound is very soft (whisper) it would be about 10 dB. If I talk in a normal voice it would be about 60 dB. If a truck passed by, that would be about 110 dB. dB is simply a way to measure loudness (like inches measure length and pounds measure weight).

Evaluation:

(1) Sound is important for three things. What are they? (Language, warning, feeling part of the world.)

(2) What two things are needed for sound to happen?

(3) How does sound travel through the air?

(4) What is pitch (frequency)? What is Hertz?

(5) What is dB?

LESSON 2

ANATOMY OF EAR; CAUSES AND TYPES OF HEARING LOSSES

Objectives:

1. Parents will describe the four parts of the hearing system and what is in each part.
2. Parents will describe how sound travels from the sound source, through the ear, and to the brain.
3. Parents will explain what can go wrong in each of the four parts of the hearing system and what has gone wrong with their child's hearing system.
4. Parents will explain cause of their child's loss.

Materials:

1. Flip chart
2. Zenith illustration, "Anatomy of Human Ear"
3. Snail shell
4. Pencil
5. Oakland filmstrip, "Anatomy of Hearing Loss" (Use as a review to illustrate concepts in the lesson.)

Lesson:

(A) Anatomy. (Use Oakland filmstrip, "Anatomy of the Ear.") There are four parts of the hearing system:

- (a) the outer ear
- (b) middle ear
- (c) inner ear
- (d) brain stem - This picture shows the four areas (flip chart, Figure 5 of Zenith's "Anatomy of Human Ear" or Oakland Filmstrip).

The first area, the outer ear, has the ear flap (auricle or pinna) and the ear canal. (Point to each part of the ear on the illustration as you proceed).

The second area, the middle ear, has the ear drum in it. The ear drum is connected to three tiny bones (hammer, anvil and stirrup). The last bone (the stirrup) is connected to the oval window. The eustachian tube is a small tube which goes from the top of the throat to the middle ear. It has two purposes. The first purpose is to drain fluid from the middle ear space. If there is fluid in the middle ear, it will run out of the ear, down the eustachian tube and into the throat. In this way, fluid will stay out of your middle ear. Sometimes infection from the throat moves up the eustachian tube to the middle ear. Have you ever had a sore throat one day and a few days later had an ear ache? Since young children have more colds and infections, it is important to make sure there is no infection in the middle ear. An ENT doctor will let you know if there is infection in

______________________ ear or not.
(child's name)

The second function of the eustachian tube is to make the air pressure in the middle ear the same as the pressure outside the ear. For example, when you drive up a mountain your ear begins to feel plugged. The air outside your ears is very "thin" since you are high but the air inside your ear is not. This heavy air inside your ear pushes out on your ear drums and you get a "plugged" feeling. When you yawn, the "thin" air from the outside rushes into your mouth, up the eustachian tube and into the middle ear. This feels like a "pop." Now the air pressure is the same on the inside and outside of your ear and the plugged feeling is gone.

The third part of the hearing system is the inner ear. It has in it:

(1) the semi-circular canals which help you to keep your balance
(2) the cochlea which looks like a snail (show shell) and
(3) the auditory nerve which goes to the fourth area, the brain stem.

Let's discuss how sound travels through the ear to the brain. As you remember, something must move for sound to occur. If my pencil moves this way, the air molecules are pushed together. The first molecule pushes the second molecule which pushes the third and so on until the molecules push in on the eardrum.

Let's pretend your eardrum is your hand. (Have mother place flat hand by her ear--show mother again in the illustration where the eardrum is.) The molecules push on your eardrum and your drum moves that way. (Push mother's hand back.) Then my pencil moves the other way allowing more room for the molecules and they all spread apart. They are no longer pushing on the ear drum. The ear drum has more space to move into so it moves back this way. (Move mother's hand other way.) As my pencil moves back and forth many times, the ear drum moves back and forth like this. (Move mother's hand back and forth many times in rhythm with your pencil.) When the ear drum moves back and forth, it moves the three little bones back and forth. (Refer to Figure 5 or Zenith illustration.) The last of the three little bones move back and forth in the oval window. This oval window is in the cochlea. The cochlea is filled with a fluid and has thousands of tiny nerve cells in it. As the last tiny bone moves back and forth, it pushes on the oval window, which pushes the fluid in the cochlea back and forth. (Refer to Figure 5 and

Figure 6 in the flip chart.) As the fluid moves back and forth, the nerves are activated in a certain pattern. The nerves join together into one large nerve that carries the pattern to the brain. (Show Figure 7 in the flip chart.)

When someone is hearing impaired, there is a problem with sound going through the ear to the brain. If there is a problem in the outer ear (wax or maybe the ear flap is missing), sound cannot travel through. Sound cannot travel through the middle ear if there are problems such as:

(1) the three tiny bones are broken
(2) there is fluid or infection in the middle ear
(3) there is a hole in the ear drum

If there is a problem in the outer or middle ear, a doctor can fix it.

If there is a problem in the inner ear, a doctor cannot fix it. Only a hearing aid can help. When the nerve cells are damaged in the cochlea, the child will have a hearing loss. Some of the things that can cause damage to the nerve cells are:

(1) high fevers, like spinal meningitis
(2) drugs
(3) extremely loud noises
(4) the mother having measles (rubella) during her pregnancy and/or other virus infections
(5) heredity and
(6) Rh blood problems.

The cause of about 40% of inner ear hearing losses are not known.

A few children have problems in the brain stem or the nerve that carries the sound to the brain. This could happen if there was bleeding or a blood clot in the brain or if there was a tumor on the nerve. The sound would come through the ear but the tumor on the nerve would block the sound and it would not go to the brain, or perhaps, the brain would be injured and it would not know when sound reached it.

The problem with ____________________ (child's name) 's hearing is here (point to outer, middle or inner ear). The problem is ____________________ (child's name) (damaged nerves, fluid in the middle ear, combination of both, unknown, etc.). Do you know the cause of ____________________ (child's name) 's hearing loss? Or as you have said, ____________________ (child's name) 's hearing loss was caused by _______________.

Evaluation:

(1) What are the four parts of the hearing system?
(2) What is in each of the four parts?
(3) What does the eustachian tube do?
(4) How does sound travel from a sound source to the brain?
(5) What can go wrong with the four parts of the hearing system? What is the problem with your child's hearing system?
(6) What caused your child's hearing loss?

LESSON 3

MEASURING HEARING LOSSES; PREPARATION FOR FITTING

Objectives:

1. Parents will explain what an audiogram is. They will describe where pitch and loudness are measured on the audiogram and what the markings mean.
2. Parents will explain what their child's hearing loss looks like.
3. Parents will describe the amount of hearing loss their child has.
4. Parents (mother) will prepare carrier pockets and vests or harnesses for the hearing aid fitting.

Materials:

1. Flip Chart - wax pencil
2. Audiometer (if possible)
3. Child's own audiogram
4. Zenith record or audio tape, "Getting Through"
5. Patterns for vests, carrier pockets, etc.

Lesson:

You will remember when ____________________ (child's name) had his hearing tested, the audiologist wrote down what ____________________ (child's name) could hear on a paper that looked like this. This is called an audiogram (show audiogram in flip chart, Figure 8). Let's talk about how the audiologist tests hearing and what an audiogram is. When a child has his hearing tested, the audiologist wants to know how loud a sound must be for the child to hear it. First, the audiologist will put on the earphones like this (demonstrate if have audiometer). Sound will come through the earphones, or the audiologist will send the sound into some speakers (like stereo speakers). The audiologist will pick one pitch like middle C. Middle C is here on the audiogram (show), lower pitches are here, and higher pitches are here. He will send the middle C sound to your child very softly. This side of the audiogram tells us how loud the sounds are. Very soft sounds are here, very loud sounds are here (point out). So the audiologist gives ____________________ (child's name) a middle C sound very softly (maybe 10-15 dB). ____________________ (child's name) cannot hear the sound so he does nothing. Then the audiologist makes the sound louder and louder. When ____________________ (child's name) hears the sound, he will blink or turn his head or raise his hand or in some way let the audiologist know he hears the sound.

If ____________________ (child's name) hears the sound when it is 80 dB loud, the audiologist will make a mark at 80 dB (point out). If he hears the sound at 95 dB, the audiologist will make a mark at 95 dB (point out). When the audiologist gives the child a sound in only one of his ears, he will send the sound into just one earphone. If ____________________ (child's name) hears the middle C in his right ear at 80 dB, the audiologist will make a circle like this (demonstrate with wax pen) at 80. If ____________________ (child's name) hears this sound in his left ear at 90 dB, the audiologist will make an X like this (demonstrate with wax pen) at 90 dB. The audiologist will then select another pitch (maybe the octave above middle C or 500 Hz; point out) and make that sound loud enough for ____________________ (child's name) to hear it. When he has finished giving ____________________ (child's name) all the pitches, he will have a picture that looks like this (complete audiogram with wax pen). This audiogram is now complete. If a child does not hear the sound even when it is 110 dB loud, the audiologist will not make a mark.

Some people have the same amount of hearing at each pitch Their audiogram may look like this (Figure 10 in flip chart). This kind of an audiogram usually means the person has a problem in the outer or middle ear. This is called a conductive loss. Some people have different amounts of hearing at each pitch. Their audiogram may look like this (see Figure 11 in the flip chart). This kind of an audiogram usually means there is damage in the inner ear. This is called a nerve loss.

Note: At this point, the parent advisor may want to describe how the audiologist determines if the child has a conductive loss (problem in the outer or middle ear) or a nerve loss (problem in the inner ear). For most parents, the explanation will be difficult. Parent advisors may want to give it to interested, educated parents. This discussion is given after the evaluation (page 174).

Let's look at ____________________'s audiogram and talk
(child's name)
about what he hears. At this very low pitch ____________________
(child's name)
hears ____________________. At this higher pitch ____________________
(child's name)
hears ____________________.

Of course different people have different amounts of hearing. A person who has normal hearing can hear sounds that are 0-25 dB loud (point out green area, Figure 9 in the flip chart). A person who has a very small (mild) hearing loss can

hear sounds when they are about 25-40 dB loud. If the sounds must be 40-70 dB, the person has a moderate loss. If the sounds must be 70-90 dB before they can be heard, that person has a severe hearing loss. A person who has a profound loss hears sound only when they are 90 dB or louder. ___________________'s
(child's name)
hearing loss is in this area (show).

Let's find out what it is like to have different amounts of hearing losses (play Zenith's record or tape, "Getting Through." If you have an audiometer, demonstrate how loud sounds must be presented for the child tohear them according to the child's audiogram. The hearing aid will make sounds loud so that
____________________ can hear them.
(child's name)

Since we will be fitting the hearing aid on _______________
(child's name)
next week, we will need to make a pocket for the aid to fit in and a vest or harness to hold the pocket. The pocket for
__________________'s aid will have to be this large (leave
(child's name)
dimensions). Here are some patterns so you can sew a vest, harness or a T-shirt (discuss patterns).

The pocket should be made of a soft material. If you use a starched, crisp material, it will scratch on the microphone or make noises that will bother your child. You will need to make a small hole here in the pocket so the sound can reach the microphone of the hearing aid.

Evaluation:

(1) What is an audiogram? Where are high and low pitches on the audiogram? Where are soft and loud sounds on the audiogram? What does the "O" mean and the "X" mean?

(2) What does ____________________'s audiogram look like?
(child's name)

(3) How much of a loss does your child have?

(4) How will you prepare a pocket and vest or harness for your child?

SUPPLEMENT

Determining a Conductive Vs. Sensori-Neural Loss. (To be used at the discretion of parent advisors for interested, educated parents.)

Pure tone thresholds are usually measured using two different transducers or sound sources. Pure tone "air conduction" thresholds are obtained using standard "earphones." In air conduction testing, sound must travel through the entire auditory system as shown in Figure 12. In general, if damage to the auditory system exists anywhere, the result will be some degree of hearing loss.

Pure tone "bone conduction" thresholds are measured using a "bone vibrator" which usually fits behind the ear. Vibration from the bone vibrator bypasses the external ear and middle ear and is transferred directly to the cochlea as shown in Figure 13. It is possible to assess the amount of hearing loss contributed by the external ear and middle ear systems versus the amount of loss contributed by the sensori-neural system by comparing the air conduction and bone conduction thresholds. For example, if a 40 dB hearing loss exists as revealed by the air conduction thresholds shown in Figure 14, but the bone conduction thresholds are normal, the problem must necessarily lie in the external and/or middle ear which is referred to as a "conductive hearing loss." On the other hand, if the pure tone air conduction and bone conduction thresholds are equivalent as shown in Figure 15, the problem must necessarily lie in or central to the cochlea. Such a hearing loss is referred to as a "sensori-neural hearing loss." It is, of course, possible for a person to have hearing loss due to both conductive and sensori-neural factors in the same ear or to have a "conductive" loss in one ear and a "sensori-neural" loss in the other ear.

LESSON 4

PARTS AND FUNCTIONS OF THE AIDS; SELECTING THE BEST AIDS; PUTTING ON THE AIDS

Objectives:

1. Parents will indicate what the four different kinds of hearing aids are.
2. Parents will explain how we will determine the best aid for their child and if one ear hears more than the other (Home Hearing Aid Evaluation Program).
3. Parents will show where the different parts of the aid are and what they do.
4. Parents will demonstrate how to put the hearing aid correctly on their child.

Materials:

1. Flip chart
2. Oakland filmstrip, "Hearing Aids" used as a review or to illustrate these concepts.
3. Child's hearing aid
4. "Time Hearing Aid Worn" form

Lesson:

Now that ____________________ (child's name) has a hearing aid, we need to find out exactly what a hearing aid is and how this hearing aid will help ____________________ (child's name).

There are four kinds of hearing aids (Figures 16, 17, 19 and 20 in the flip chart).

(1) all-in-the ear
(2) over the ear

(3) eyeglass, and

(4) body aid

Your child's hearing aid is a ____________________ aid. This hearing aid may or may not be the best hearing aid for
____________________. With what we now know about ______________'s
(child's name) (child's name)
hearing loss, this is the best aid to start with. However,
____________________ is very young, and it is difficult to know
(child's name)
exactly where his hearing is. He cannot tell us with words what he can and cannot hear or whether he hears better in the left or right ear. The audiologist tries to notice eye blinks, head turning and other actions which tell us that the child hears, but sometimes the child may hear a sound and not respond. We will keep testing ____________________ as he gets older so we will know
(child's name)
exactly where he hears in each ear. In the meantime, we will try a hearing aid on ____________________'s left ear and then his right
(child's name)
ear to find out if one ear is better than the other. We will then try about three different hearing aids to see which one will help him the most. The audiologist cannot watch your child during the day to see which ear is the best or which hearing aid is the best, but you can. After ____________________ is wearing this aid most
(child's name)
of each day, we will explain to you how to watch for the sounds he hears and how to write that down.

For now, the important thing is for ____________________
(child's name)
to wear his aids during all waking hours. Here is a form that you can use to write down how long your child wears his aids (show and explain "Time Hearing Aid Worn" form).

____________________'s hearing aid is like any other loud
(child's name)
speaker system in a store or church (Figure 16). There is a microphone for the person to talk into. There is an amplifier

which makes the sounds of that person's voice louder, and then there are speakers where the loud sounds come out for other people to hear.

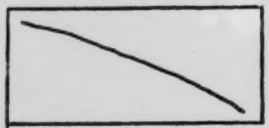
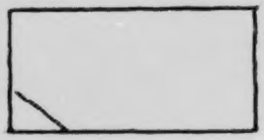
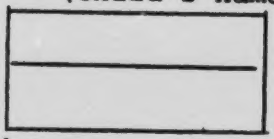
In ________________ (child's name)'s hearing aid there is also a microphone (show where). This is where the sound comes into his hearing aid. The microphone changes the sound into electrical waves (Figure 21). The electrical waves then go to the amplifier where they are made into bigger waves. We cannot see ________________ (child's name)'s amplifier since it is inside the hearing aid. The big electrical waves go to the receivers (same as the speakers). These big electrical waves are changed back into sound waves since our ears hear sound, not electricity, but now the found is louder since the waves are bigger. Now ________________ (child's name) can hear sounds around him because they are louder.

On-Off Switch: The next part of ________________ (child's name)'s hearing aid is the on-off switch. It is like the on-off switch on any radio or T.V. It simply turns the hearing aid on and off.

Battery: The batter gives the hearing aid power to make the small electrical waves into big waves. The big waves are louder sounds. Batteries have (+) and (-) ends. The (+) end must match the (+) end inside the hearing aid (show). The (-) end of the battery must match the (-) end inside the hearing aid (show). The name of the battery is not important. The important thing is the right size. This hearing aid needs a battery __________ size. When you go to the store ask for ____________________. You can get batteries at drug stores or hearing aid dealers. Make sure they check the batteries before they sell them to you to make sure they are fresh. You can check to make sure the battery is fresh each day by using a battery tester. It works like this (demonstrate). The needle must point

1 or above if the battery is fresh. If the needle is below 1, throw the battery away. If you send $__________ to the Project, they will order one for you. The battery will usually last from one to two weeks. Note: For deaf parents, leave a battery tester with them during the week so they will know if the aid is working. Make immediate arrangements for them to purchase one of their own.

Volume Control: This switch makes the sounds that go into the hearing aid louder and louder. Here the sounds are very soft (let mother listen). Here the sounds are louder (mother listens). We will leave the volume on number _____. We may have to put the volume switch higher if the sounds are not loud enough for __________________ (child's name), or we may put the volume switch lower if __________________ (child's name) acts like the sounds are too loud. You should watch for this. If __________________ (child's name) does not respond to any sounds, turn the aid up slightly to __________. If __________________ cries, blinks, jumps, or pulls at his aids when there are sounds, turn the aid down to __________.

Tone Control: (Explain if aid has external control.) The tone control will make pitches louder than others (Figure 22). For example if ____________________ (child's name) had an audiogram that looked like this  that tells us he has an easy time hearing low pitches and a hard time hearing high pitches. We would want to help him by pushing up the high pitches (demonstrate by pushing up high frequency). If we put the switch on "H," the the high pitches would be pushed up the most and they would be the loudest. If ____________________ (child's name) had an audiogram like this  that would mean he only has some hearing in the low pitches but nothing in the high pitches. So we would push up the hearing that he has in the low pitches (demonstrate). We would put the aid on "L." If ____________________ (child's name) had an audiogram that looked like this  that tells us he hears all the pitches about the same. We would help him by putting the switch on "N." That would push up all the pitches and make them all louder (demonstrate pushing all frequencies up). ____________________ (child's name)'s hearing aid should be on __________ (setting) because ____.

Telephone Switch: This switch has three letters on it. When it is on "M," ____________________ (child's name) can hear all the sounds around him. When the switch is on "T," ____________________ (child's name) would be able to hear a voice coming from a telephone. He is too young to worry about that now. When ____________________ (child's name) is older and and in school, he will put this switch on "MT." If the teacher wears a microphone, ____________________ (child's name) will hear only what the teacher is saying into the microphone. For now, this switch must always stay on "M" so ____________________ (child's name) can hear all sounds around him.

Cord: The cord is a wire that takes the big electrical waves to the receiver. You remember the big electrical waves are changed back to loud sound waves in the receiver so ________________ (child's name) can hear them. You must always have an extra cord on hand so when this one breaks, you can put a new one right on. You can buy the cord at ________________________________.

Ear Mold: The mold fits into the ear. It must fit exactly so it will be comfortable. If it is too large, it hurts ____________________'s ear. If it is too small, the loud
(child's name)
sound waves will leak out around the mold. You will be able to hear these loud sound waves. They sound like this (demonstrate feedback whistle by putting mold and receiver close to microphone). Molds usually cost from $15 to $20. We will make new molds for ____________________ when he needs them. The Parent-
(child's name)
Infant Program will pay for them.

Each morning when you put on ____________________'s
(child's name)
hearing aids, it is important that the aid is put on correctly. This is the way it should be done:

(Demonstrate)

(1) Place the harness or vest on your child.
(2) Place the hearing aid in the carrier pocket making sure all switches are "off."
(3) Connect the receiver to the mold.
(4) Place the ear mold in the child's ear (demonstrate how to insert the canal of the mold with the superior tip of the mold facing forward, then lifting the ear flap up and out and screwing in the mold).
(5) Move the cord out of the way.
(6) Turn the switches on. Make sure the telephone switch is on "M."
(7) Put the volume at the right number.
(8) Put on the baby cover if you have one.

Evaluation:

(1) What are the four kinds of hearing aids?

(2) How will we know which hearing aid will help your child the most or if he hears better in one ear than the other?

(3) (If appropriate) Why is it difficult to know exactly how much your child hears now?

(4) What do the microphone, amplifier, and receivers do?

(5) Have parents demonstrate how to put the hearing aid on their child.

(6) Have parents point out and explain the function of the hearing aid parts.

LESSON 5

DAILY LISTENING CHECK; DOWNS' APPROACH IF NECESSARY

Objectives:

1. Parents will correctly explain the parts and function of their child's hearing aid (review).
2. Parents will perform the daily listening check correctly.
3. Parents will correctly identify the problem with each aid in the defective kit.
4. Parents will explain how to use Marion Downs' "Establishment of Hearing Aid Use" if necessary.

Materials:

1. Daily listening check chart.
2. Downs' approach, "Establishment of Hearing Aid Use" (if necessary).
3. Defective hearing aid kit.

Lesson:

Let's review the parts of the hearing aid and what they do (use Oakland filmstrip, "Hearing Aids" or child's own aid). It is necessary that all of these parts are working all of the time. How will you know if they are working? (Note: Parent advisor demonstrates entire listening check as she explains it).

(1) Check to make sure the battery is fresh. Remember if your battery tester points to 1.0 or less, the battery is no longer fresh. You should throw it away and put in a fresh one.

(2) Put the battery in the hearing aid. Make sure the (+) end of the battery matches the (+) end in the hearing aid

and the (-) end of the battery matches the (-) end in the hearing aid.

(3) Make sure the on-off switch is on "off." Put the volume control at the lowest number. Make sure the telephone switch is on "M."

(4) Put the receiver in your ear. Cover the receiver with the palm of your hand. Do not press the receiver too hard.

(5) Turn the on-off switch to "on."

(6) Slowly turn the volume control up louder and louder.

Listen for:	What To Do:
a) The hearing aid does not get louder and louder.	a) Make sure the telephone switch is on "M"! Make sure the battery is fresh! If the sound still does not get loud, call the Parent-Infant Program and ask for a loaner hearing aid. Send the broken aid to the Parent Infant Program.
b) The hearing aid goes on and off.	b) Call the Parent Infant Program and get a loaner aid. Send the broken aid to the Parent-Infant Program.
c) The hearing aid has a loud scratchy sound in it.	c) Same as "b" above

(7) Roll the cord back and forth between your fingers.

Listen for:	What to Do:
a) The hearing aid goes on and off.	a) Put on a new cord.

(8) Tap the hearing aid gently on all sides and gently shake the hearing aid.

Listen for:	What To Do:
a) The hearing aid loses power (it gets softer).	a) Call the Parent-Infant Program and ask for a loaner aid. Send broken aid to Parent-Infant Program.
b) You hear a rattling sound caused by loose screws.	b) Same as "a" above.

Note to parent advisors: If this lesson is being taught to deaf parents (minimal hearing): (a) see if there is a hearing sibling or relative who can learn the daily listening check and teach it to them or (b) if not, follow these procedures:

Daily Check:

1. Make sure the battery is fresh. If the battery is less than 1.0 on the battery tester, throw it away.
2. Make sure all the controls are off. The mike-telephone switch should be on "M."
3. Put the receiver to your ear and cover it with your palm. Turn the aid on and turn the volume switch up. Is the aid working? Do sounds get louder? If not, send the aid to the office with a note asking for a loaner.
4. Look at the cord. Are there any breaks or holes in the cord? If so, put on a new cord.
5. Look at the controls. Is there food or dirt in them? Are the controls stuck so they will not turn "on" and "off"? If so, clean with a toothpick or q-tip or small pipe cleaner.

For persons with no hearing, have them do this:

1. Make sure the battery is fresh. If the battery is less than 1.0 on the battery tester, throw it away.

2. Make sure all the controls are off. The mike-telephone switch should be on "M."
3. Look at the cord. Are there any breaks or holes in the cord? If so, put on a new cord.
4. Look at the controls. Is there food or dirt in them? Are the controls stuck so they will not turn "on" and "off"? If so, clean with a toothpick or q-tip or small pipe cleaner.
5. Put the hearing aid on your child. Turn it to the right volume setting.

Now, you show me how to make sure the hearing aid is working properly (parents demonstrate daily listening check). You will do this every morning.

Here are several hearing aids (show defective kit). Each hearing aid has something wrong with it. You listen to each aid and tell me what the problem is.

Defective Kit Activity:

Note to parent advisors: If the child is rejecting the hearing aid, explain to the parents Marion Downs' "Establishment of Hearing Aid Use." Basically the approach entails:

Week 1: Put the hearing aid on the child (without turning it on) for five minutes, four times each day. Play quietly and lovingly with the child while the aid is on. Hold down his arms and legs gently but firmly if necessary.

Week 2: Put the hearing aid on fifteen minutes, four times each day at one-third the desired volume. Point out pleasant sounds.

Week 3: Put the hearing aid on 30 minutes, four times a day a little above one-third volume. Call his attention to sounds as you work around the house.

Week 4: Put the hearing aid on 45 minutes, four times a day. Setting should be almost at right loudness level.

Week 5: Put on the hearing aid one hour, four times a day. Aid should be at the right loudness level.

Week 6:

and

Thereafter: Increase wearing time until child is wearing aids all waking hours.

The important thing now is that ____________________ (child's name) wear his hearing aids as long as possible. Every minute and hour that ____________________ (child's name) is without a hearing aid, we are losing "listening time." It takes hearing children about one year of "listening time" before they start to use language and speech. If we cheat on ____________________ (child's name)'s listening time and do not give him enough, it will take him longer to learn language and speech. We must give ____________________ (child's name) as much listening time as possible by keeping the hearing aids on him. This week ____________________ (child's name) should wear his hearing aids at least ______________ (no. of hours). You will continue to write down on the form, "Time Hearing Aid Worn" how long ____________________ (child's name) wears his hearing aid this week.

Evaluation:

(1) Parents perform the daily listening check.

(2) Parents correctly identify the problems with each aid in the defective kit.

(3) Parents explain how to use Downs' "Establishment of Hearing Aid Use" if necessary.

LESSON 6

CARE OF THE HEARING AID AND TROUBLE SHOOTING FOR FEEDBACK SOURCE

Objectives:

1. Parents will demonstrate how to take proper care of the batteries, controls, switches, microphone, cord, receiver, molds, tubing, and the body of the hearing aid.
2. Parents will demonstrate how to trouble shoot for the source of feedback.
3. If the child has accepted his aid, parents will describe how to obtain and keep data on the "Hearing Aid Evaluation Form for Parents."

Materials:

1. Child's hearing aid
2. "Home Hearing Aid Evaluation Form"

Lesson:

Last week we talked about how to make sure ______________'s (child's name) hearing aids working properly. The best way to keep the hearing aids working properly is to take care of them. Let's talk about taking care of the hearing aids.

(a) Care of the batteries: Take the batteries out of the hearing aid when the aid is not being used. Do not keep many extra batteries. Get enough for only two months at one time. (Parent advisors: Indicate about how many batteries that would be--two extra batteries if the aid holds one battery, three to four extra if the aid holds two batteries.) Keep batteries in a cool, dry place.

(b) Controls, Switches, and Microphone: Be very careful to avoid getting food and dirt in the controls, switches or the microphone. (Note to parent advisors: If the aid has a baby cover, explain to the parents how the "cover" keeps the food and dirt out of the controls and switches.) The aid can be worn under ______________'s shirt if the
(child's name)
cloth is very soft. Rough cloth will scratch against the hearing aid and make loud scratchy sounds that will bother ______________. (Note to parent advisor: After parents
(child's name)
purchase aids, remind them that all aids should be cleaned each year.)

(c) Care of Cord: It is easy to break the cord. Be careful not to bend the cord too much or knot it. Do not allow your child to bite or chew the cord. (Note to parent advisors: If the child is a "cord chewer":

a) channel the cord from his front, under his arm, up his back and to his ear or,
b) obtain shorter cords (parents buy cords) or
c) pin cord down (safety pin goes around cord not through it)
d) obtain "thumb" (or other "nasty tasting" spray) from drug store and spray on cord.
e) put hearing aid on back of child and channel cord up to ear (last resort).

Pull out the cord by pulling on the plastic end. Do not pull on the cord itself (demonstrate).

(d) Care of the Receiver: Do not drop or bang the receiver. The receiver is very fragile and expensive. (Parent advisors: Leave receiver saver with family. The receiver saver connects the receiver to the cord so the receiver will not fall off the cord.)

(e) Care of the Earmold: The earmold should always be clean. Look at the mold. If there is any dirt in the hole, it will block the sound so it can't get to ________________ (child's name)'s ear. Wash the mold with warm water and soap (do not use alcohol). It is best to check the mold to see if it is dirty each night. Wash the mold, and then let it dry until morning. If you do not give the mold enough time to dry, the water in the aid will stop the sound from going to ________________ (child's name)'s ear. Sometimes you can get the dirt and wax out of the mold hole by using a toothpick or a small pipe cleaner (parent advisor demonstrate cleaning).

(f) Care of the Plastic Tubing and Nozzle: (If hearing aid is ear level): Keep the tubing and nozzle clean. Dirt will block the sound from getting to your child's ear. Clean with warm water and soap (let dry thoroughly or clean with a pipe cleaner or a toothpick).

(g) Care of the Body of the Hearing Aid: Do not do three things to the hearing aid:

1. Put it in a very cold or very hot place
2. Put it in water
3. Drop it or bang it.

Now you show me how to care for ________________ (child's name)'s hearing aid. If you take care of the hearing aid it will work better and longer. ________________ (child's name) will have good, continuous hearing time because his aid will not be broken. There is another way to make sure ____________________ (child's name) has good, continuous hearing time. If his molds are too small, the sound leaks out around the molds. This makes a whistle sound (demonstrate). Sound may leak out between the receiver and the mold (point). This will also cause the whistle, or there may be something wrong inside the aid that will cause the whistle. When parents hear the whistle they turn down the hearing aid to make the whistle go away. If the aid is turned down _______________ (child's name) cannot hear sounds very well. He cannot get good, continuous listening time. It is better to get new molds that fit or fix the hearing aid instead of turning it down. If you hear the whistle, you should find out where the whistle is coming from and then fix it. This is how you do that:

1. Take the hearing aid off your child. Keep the hearing aid on the loudness setting it is already on. Put your finger over the end of the mold hole. If the whistle goes away the mold is too small. Have the parent advisor make a new mold impression for your child.

2. If the whistle does not go away, take off the mold and put your finger over the receiver hole. If the whistle goes away ask the parent advisor to get you a plastic washer. This washer will help stop the sound from leaking out between the receiver and mold.

3. If the whistle still does not stop, the hearing aid is broken. Send it back to the office and ask for a loaner hearing aid. (Note to parent advisors: If you are teaching deaf parents who cannot hear the whistle, you will want to tell someone who is hearing (sibling or friends) to inform you when the feedback whistle occurs. If this is not possible, parent advisor will have to listen for the whistle at the home visits and take appropriate action).

For Parent Advisors:

If the hearing aid is accepted at this time (at least half of the child's waking hours), it is time for the home hearing aid evaluation program to officially start. (This is the program of trying one aid on one ear then alternating it to the other ear. Several different sets of aids are then tried.) Parents must begin to keep data on how the child responds to these particular aids. They will no longer keep data on the "Time Hearing Aid Worn" form. They will keep data on the "Hearing Aid Evaluation Form for Parents." Explain to the parents how to keep the data.

1) How many hours the aid is worn each day. (Write this down at the end of each day.)
2) What sound does he hear? How do you know he hears these sounds?
    Example: (1) He heard the car honk, he turned his head.
    (2) He heard the blender, he looked up. Write this down when it occurs. If it occurs too often, write a brief summary at the end of the day.
3) What does he say?
    Example: (1) Ma-ma, ba-ba. (Write this down when it occurs. If it occurs too often, write a brief summary at the end of the day.)
4) Attitude - Does the child like his hearing aid? Does he seem to enjoy it? (Write this down at the end of the day.)

Evaluation

(1) How do you take care of:
    a. batteries

    - b. controls, switches, mike
    - c. cord
    - d. molds
    - e. tubing and nozzle
    - f. receiver
    - g. body of the hearing aid

(2) Parents perform the trouble shooting for the source of feedback.

(3) If the child has accepted the hearing aids, how do you obtain and keep data on the "Home Hearing Aid Evaluation Form For Parents?"

LESSON 7

"MAINTAINING CHILD'S HEARING AID THE ROLE OF PARENTS" - DOWNS

To Parent Advisors:

Many of the questions on Marion Downs' "Maintaining Children's Hearing Aids" will have already have been asked by the parents. If you feel all of the questions on this handout have been sufficiently answered, this lesson is not necessary. However, to take the time to review their questions and discuss questions that may not have been raised is advisable.

Objectives

1. Parents will be able to answer the following questions:
    (1) What do you do if the receivers and molds keep falling out?
    (2) What do you do if your child keeps pulling the receivers and molds out of his ears?
    (3) Why does your child sometimes respond to sound without his hearing aids on?
    (4) Your child has worn the aid several weeks/months and is still not paying attention to sounds. He is still not talking, why?
    (5) Why are properly fitting molds so important? What is a good way to make sure new molds are good?
    (6) Why is it important to keep the aid at the right loudness setting? How can you remember to do this?
    (7) How do you know if the hearing aid is working properly? What can you do as a parent to keep the aid working as best and as long as possible?
    (8) How do you give sounds to your child so he can "Listen" all during the day?

MAINTAINING CHILDREN'S
HEARING AIDS
THE ROLE OF THE PARENTS
(REVISED)

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There are three things to remember when your child has a hearing aid:

1. Keep the hearing aid on the child.
2. Keep the hearing aid working all the time.
3. Using the hearing aid so the child can learn to listen.

I. Keeping the Hearing Aid on the Child

If a hearing aid has been recommended for your child, you may be sure that he needs it. He will only receive the most help from it if it is worn all his waking hours, not just a part of the day. Some children, when they become older, even ask to wear an aid while they are sleeping because, they say, "it makes them a part of the world at night."

Why do parents report that they have trouble keeping aids on their children? Why are the aids so often seen on the shelf rather than on the ears?

Here are some complaints that parents make and some suggestions about what can be done.

COMPLAINT: THE RECEIVER AND EARMOLD WON'T STAY IN THE EAR

REMEDY: Babies have very small, soft ears. The whole ear may be too small for both the earmold and the receiver to fit in it. The ear may be so soft that the receiver easily falls out. Your audiologist may put a short tube from the receiver to the earmold. The receiver can then be put just behind the ear flap. The tube can be made strong with wire so it will hold its shape to the ear. Or the audiologist may put the receiver on the shoulder with a tube up to the mold.

After a year or 18 months, the ear should be large enough to hold both the receiver and the earmold. If they still keep falling out, ask to have another earmold made. Maybe a softer mold would be better.

Sometimes the cord keeps getting in the way of small hands, and the receiver is accidentally pulled out. Try placing the aid on the back instead of the front. Hold the cord down to the back of the shirt collar with a safety pin. The safety pin goes around the cord, not through it.

If the earmold still keeps coming out, you may have to make a knitted band for him to wear. Or, in the case of a girl, a ribbon or a little bonnet can be used.

COMPLAINT: JOHNNY CONTINUALLY PULLS THE RECEIVER OUT OF HIS EAR, SO THE EARMOLD MUST BE HURTING HIM, OR THE AID MUST BOTHER HIM, OR PERHAPS HE DOESN'T NEED AND AID AND IT DOESN'T DO HIM ANY GOOD.

REMEDY: You probably need to be more firm with your child. But just to be sure, check the aid carefully.

1. If there's some real soreness from the earmold that is hurting him, there's a way to find out: (1) make an appointment with your doctor, (2) put the earmold in Johnny's ear for an hour before you see the doctor. He will look at Johnny's ear for soreness. If there is, the mold can be remade with a special material or made smooth if there is a rough spot.

2. If the aid is "bothering him," the audiologist can tell by doing tests with the aid turned up very loud. If loud sounds make Johnny blink or cry, then the audiologist will turn the hearing aid down.

3. If you feel Johnny "doesn't really need the aid," you should ask the audiologist to make another test. He will show you what sounds Johnny hears and what sounds he doesn't. Often, after a child has worn an aid for a while and has learned to hear sounds around him, he will respond to some sounds even when he is not wearing the aid. He is responding to "little cues." That means he knows sounds are important so he is listening to them. He may be hearing only a part of a sound, very softly, but he now pays attention to it. This does not mean that his hearing has improved or has become normal, much as we would like that to happen. It is very exciting to know that he is making use of every bit of his hearing.

You should begin to work toward training him never to touch the receiver or to take it off.

COMPLAINT: HE'S WORN THE AID SEVERAL MONTHS, AND HE ISN'T TALKING YET, SO IT'S NOT DOING HIM ANY GOOD. I DON'T SEE WHY HE SHOULD WEAR IT.

REMEDY: How long does a newborn baby have to hear sounds before he is even able to pay attention to them? Six to nine months. How long before he begins to talk? One to one and a half years. A child who has just begun to wear a hearing aid needs the same time as the newborn baby--his "hearing age" starts from the time the hearing aid was put on. He must go through the same time of learning to listen, and learning to use sound himself.

II. Keeping the Aid Working All the Time

COMPLAINT: JOHNNY DOESN'T SEEM TO BE GETTING MUCH FROM HIS HEARING AID LATELY: HE'S NOT ATTENTIVE ANYMORE AND HE ISN'T MAKING ANY MORE PROGRESS.

REMEDY: Check the volume setting on the aid Is it being worn at the right setting? Are you turning it down because of the "whistle"? If so, the earmold may not fit anymore. At least half of the problems with hearing aids are because the molds are too small and sound leaks out from around the mold. You then hear a "whistle." You should have a new earmold made if you hear the "whistle."

A good rule to follow when you get a new earmold is to turn the hearing aid up as loud as it will go. Put the mold in the ear. If there is any "whistle" at this setting, don't accept the mold--ask for another one to be made.

You should be prepared to buy new earmolds often. A baby may need new molds every two to three months; from two years to six years of age it may be every six months to a year; and from six to twelve years, it will be at least every year or two.

Make sure the aids are working properly. Give them a listening check each day. If you still wonder if they are working, take the aids to the audiologist or the Parent-Infant Program office. A machine will tell us if the aid is broken or not. It will tell us if there is too much noise in the aids that bothers your child.

COMPLAINT: SOMETHING ALWAYS SEEMS TO BE DOING WRONG WITH JOHNNY'S AID. I GET SO TIRED OF TAKING IT BACK TO THE DEALER.

REMEDY: (1) Remember, a hearing aid is a very small machine with thousands of small parts in it. Many things can go wrong with it. Remember, it is being used many hours each day. Most machines need fairly often repair if they are used all of the time. (2) Make sure you are doing everything you can to take care of the aid (review Lesson 6). (3) Check the aid each day to make sure it is working properly (see Home Hearing Aid Lesson 5, "Daily Listening Check").

The proper volume control setting may be indicated by a spot of colored nail polish placed at the top of the volume wheel when it is at the desired setting. (4) When your aid is being repaired, make sure you ask for a loaner one.

III. Using the Hearing Aid so the Child Can Learn to Listen

COMPLAINT: MY BABY DOESN'T SEEM TO LISTEN VERY WELL EVEN THOUGH HE NOW HAS A HEARING AID.

REMEDY: The child should be given sounds to listen to all of his waking hours. He should be talked to, sung to, and called to until he is put to bed. You must not expect him to talk immediately. (Review what was said about "hearing age" above.) The normal child spends a full year in listening before he learns to speak.

Evaluation:

(1) What do you do if the receiver and molds keep falling out?
(2) What do you do if your child keeps pulling the receivers and molds out of his ears?
(3) Why does your child sometimes respond to sound without his hearing aids on?
(4) Your child has worn the aid several weeks or months and is still not paying attention to sounds. He is still not talking, why?
(5) Why are properly fitting molds so important? What is a good way to make sure new molds are good?
(6) Why is it important to keep the aid at the right loudness setting? How can you remember to do this?
(7) How do you know if the hearing aid is working properly? What can you do as a parent to keep the aid working as best and as long as possible?
(8) How do you give sounds to your child so he can "listen" all during the day?

Recommended Reading for Parents

Pollack, Doreen, Educational Audiology for the Limited Hearing Infant, Chas. C. Thomas, Springfield, Illinois 1970.

Harris, Grace M., Language for the Preschool Deaf Child, Grune and Stratton, New York, Second Edition, 1963.

Auditory training materials, listed by the Volta Bureau, 1537 35th Street, N.W., Washington, D.C.

LESSON 8

REVIEW

Objectives:

(1) Parent advisor will review the concepts discussed in Lessons 1-7.

Materials:

(1) Materials from previous lessons as appropriate.

To Parent Advisors

This lesson should be a thorough review of Lessons 1-7. The following concepts should be reviewed:

Lesson 1

The importance of sound. What is sound? How sound travels. The meaning of frequency, Hertz, and dB.

Lesson 2

The four parts of the hearing system and what is in each part. How sound travels through the ear to the brain. What can go wrong in the four parts of the hearing system. The problem with the child's hearing system. The cause of the child's hearing loss.

Lesson 3

Explanation of the audiogram. The amount of the child's hearing loss.

Lesson 4

How we determine the best hearing aids for the child. The four different types of hearing aids. The parts and functions of the child's hearing aid. How to put the hearing aid on the child correctly.

Lesson 5

The daily listening check.

Lesson 6

Care of the hearing aid. Trouble-shooting for the source of feedback. Obtaining and keeping data on "Home Hearing Aid Evaluation Form for Parents" (when child has accepted the aids).

Lesson 7

Giving the child sufficient listening time before expecting him to attempt to sound or speak. Why the child may respond to sounds without aids. Importance of keeping aids on the right loudness level. Importance of properly fitting molds. How to provide child with continuous listening experiences.

LESSON 9

"SOUND APPROACH"; "CHANGING SOUNDS"; AND COMPETENCY TESTS

Objectives:

(1) Parents will be shown slide and tape presentations, "Sound Approach" and "Changing Sound."

(2) Parents will perform 80% on Competency Test.

Materials:

(1) Slide and Tape Presentations, "Sound Approach," and "Changing Sounds"

(2) Slide Projector and Tape Recorder

(3) Competency Test.

HOME HEARING AID COMPETENCY TEST

1. Parents will point out the parts of their child's hearing aid and describe the function of each part.

2. Parents will be able to follow the steps in fitting the hearing aid on their child.

3. Parents will be able to describe how to care for the batteries, switches and controls, cords or plastic tubing, receiver, earmolds and the body of the hearing aid.

4. Parents will perform a daily listening check.

5. Parents will troubleshoot the hearing aid for the source of feedback.

Each question is worth 20%. Total - 100%.

AUDITORY PROGRAM

Introduction

A complete auditory program for hearing impaired children must have the following components:

(1) early identification

(2) early fitting of amplification

(3) a means of evaluating the infant for the dorrect aid

(4) operable aids are being worn full-time by the child

(5) a means of teaching the child to use his residual hearing

The first four items have been discussed. The home auditory program teaches infants and young children how to use their aided residual hearing.

There are eight listening steps in the auditory program. They are:

(1) reflexive

(2) alerting to sounds

(3) locating sound sources

(4) distance hearing

(5) levels of hearing

(6) gross environmental discrimination

(7) gross vocal discrimination and

(8) fine speech discrimination

The presentation of this home auditory program will contain two sections. The first section will describe the entire auditory program, i.e., a definition of the eight listening levels, how communication skills are taught along with the listening levels, criteria for moving on from one auditory level to another and the use of auditory clues with the auditory levels. The second section will discuss how each level is taught in the home and auditory activities that accompany each auditory level.

SECTION I: OVERVIEW OF AUDITORY PROGRAM

Auditory Levels and Definitions:

The definitions of the eight auditory levels are indicated below. Notice the four auditory phases. Phase I is the time that the child learns to respond to a variety of sound sources at varying levels and distances. Phase II is when the child can discriminate environmental sounds i.e., associates sounds correctly with their sources. Phase III is when the child can make vocal discriminations of associating onomatopoeia sounds with their sources and associating functional words (if possible with strong prosody patterns) with their meanings. Phase IV is when the child can hear the differences between phonemes. He can hear the difference between vowel and consonant sounds.

AUDITORY LEVEL DEFINITIONS

Auditory Phase I

LEVEL 1: REFLEXIVE

Child responds reflexively to sounds

1. moro response
2. startle
3. cessation of activity
4. widening of the eyes
5. increase in activity
6. crying

LEVEL 2: ALERTING TO SOUNDS

Child knows a sound is present but does not know its source. Child may respond by pointing to the ear, facial expression, searching for the sound, etc.

LEVEL 3: LOCATING THE SOUND SOURCE

Child can locate the sound source. The child may turn to the sound source (localize), run to the sound source, etc.

LEVEL 4: DISTANCE HEARING

Child hears sound at varying distances. He may localize to the sound, find the sound, run to the sound, etc.

LEVEL 5: LEVELS OF HEARING

Child hears sound above and below him. He may turn to the sound, go to the sound source, etc.

Auditory Phase II

LEVEL 6: GROSS ENVIRONMENTAL DISCRIMINATION

Child can associate the sound with its source. He may respond by pointing to the source of the sound (without seeing the sound source when the sound is presented) imitating the sound, using the sound source correctly.

Auditory Phase III

LEVEL 7: GROSS VOCAL DISCRIMINATION

a) onomatopoeia sounds
b) functional words with strong prosody patterns

Child can make prosodic discriminations. He can associate the sound with source (toot-toot with train). He knows the nature of the sound and will imitate it. He knows the function of the sound. (When he hears "no no" that means to stop.)

Auditory Phase IV

LEVEL 8: FINE SPEECH DISCRIMINATION

a) vowels
b) consonants

Child can make phonemic discriminations. He indicates this discrimination by:

a) imitation
b) pointing to correct picture or item after hearing word
c) responding correctly to the word

Communication Skills To Be Incorporated In The Auditory Program:

It is essential that parents learn to communicate with their child while the child is learning to listen. During the auditory levels, the child is learning to respond to sounds at varying levels and distances and making environmental and vocal discriminations. If parents learn how to develop basic communication skill with their child while the child is learning how to listen, they will be encouraging the child's language development. The SKI*HI Communication Program, page 259 in this manual, provides strategies for developing communication skills as the auditory program progresses. After the completion of the Communication Program, the Language Program is initiated.

The diagram on page 261 shows the relationship among the Home Hearing Aid, Auditory, Communication and Language Programs.

Criteria For Moving To A Higher Auditory Level:

The following guidelines should be used in determining when it is time for a child to move to a higher auditory level.

If a child is on one auditory level (i.e., localization) he should respond (localize) without clues to three or more different sound stimuli at a 50% or higher consistency level before the next auditory level is initiated. For example, the child would localize to knocking, his name when called, and an electrical appliance (without clues) half or more of the times during presentation of these sounds before moving on to "distances". It is not necessary for the child to respond (localize) to three or more stimuli with distraction since distraction is not a constant element during the child's day. However, since distraction often occurs, activities should be presented on each level that incorporates mild to strong distraction and the child should respond at least once under distraction to two to three different sound stimuli.

Auditory Clues:

Auditory clues are used to encourage the child to listen carefully for sounds. They are devices to "tune-in" a child to sound.

Clues constitute such things as bareing the ear and cocking the head, pointing to the ear and saying listen, holding up a dog's ear or a toy's ear indicating "listen", covering both ears with both hands, etc. Auditory levels two through five are always first taught with clues. Then the child listens to sounds without clues and then with distraction.* Auditory clues are used with gross environmental discrimination, gross vocal discrimination, and fine speech discrimination if the child is not listening and needs clues as a reminder to listen.

*For example, if the child is being taught to localize to the telephone, the skill is first taught with clues - "Listen, Johnny, listen carefully." Second, the sound would be presented without clues. Lastly, Johnny would be distracted (food, toys, etc.) while the sound was presented.

SECTION 2: TEACHING THE AUDITORY PROGRAM IN THE HOME

Steps In Teaching Auditory Skills:

The teaching of each auditory level is based around the concept that the parent advisor models the skill to the parent and then the parent performs that skill for the parent advisor. The following six steps are used in teaching the parents the auditory skills:

1. Parent advisor describes the skill. Usually this description involves what sound the mother will use, how to use clues, how to present the sound, what responses to look for in the child, what to do if the child responds, and what to do if the child doesn't respond.
2. Parent advisor models the skill using the hearing impaired child.
3. The mother performs the skill with the child.
4. Parent advisor reinforces specific things mother does well.
5. Parent advisor and mother discuss mother's performance, i.e., "How did mother feel about her performance?" "How would she have done it differently?", "Where and when can you use the skill during the week?" (specific time and places) etc.
6. Challenge (left in writing in the parent's notebook).

Note: It may be necessary for the parent advisor to model the skill, discuss and then challenge without having the mother perform. This would be done if the mother feels particularly awkward about working with the child. In that case, give the mother the week to practice the skill in her home. At the next session, have the mother perform the skill.

The specifics of teaching each auditory level follow:

LEVEL 1 - REFLEXIVE

Reflexive responses are usually present in normally hearing children at birth but are gradually inhibited. These responses may or may not be obtained in the hearing impaired child. These are reflexive responses (startle, cry, cessation of activity, etc.) and cannot be taught. Some suggested sounds that parent advisors and parents could use to elicit these reflexive responses are:

a) pans banging
b) clackers
c) buzzers
d) doors slamming
e) loud name calling
f) electrical appliances
g) knocking
h) water running
i) horns, drums
j) dropping objects (either to the floor or in to a metal can)
k) telephone
l) doorbell

Such responses are to be watched for and noted by parent and parent advisor. After noting these responses, the parent advisor teaches the parents Level 2.

LEVEL 2: ALERTING - POINTING OUT ENVIRONMENTAL SOUNDS

A. Describe skill to mother by telling mother:

1. What sound to use: Natural sounds in environment such as dogs barking, electrical appliances, children shouting, knocking on doors, water running, toilet flushing, car horn honking, doorbell ringing, telephone ringing, doors slamming, radio, t.v., etc. Note: It may be well to have mother concentrate on the sounds occuring in one room only; then the next session use a different room. (It may be helpful to blind fold parents and ask them to tell you the different sounds in various rooms and outside.)

2. Clues: Tell mother to clue child in; tell him to "listen" to the environmental sounds as they naturally occur. Then have mother point out the sound to the child. Have mother indicate that she hears the sound. Example:

   a) phone rings

   b) mother clues, "listen" - no response from child

   c) mother shows child phone ringing. mother says, "I hear that."

3. What to do if child responds spontaneously: Reinforce, reinforce, reinforce.

B. Parent advisor demonstrates pointing out environmental sounds to the child.

C. Mother performs. Parent advisor notes how many sounds occurred spontaneously and how many sounds mother pointed out to the child (opportunities vs. utilizations). This will be the baseline of mother's performance. For example, there were six natural sounds in the home, but mother only pointed out three. Baseline 3/6 (three out of six) or 50%. Mother is reinforced for sounds she does point out.

D. Discuss mother's performance and challenge. Example of challenge:

During the week, point out sounds in your kitchen as they naturally occur. Next week be ready to show me that you can point out to Johnny 75% of the sounds that occur in your kitchen.

Note: At subsequent sessions-

a) Obtain mother's baseline on pointing out sounds in different rooms and outside. Challenge her to increase her baseline during the week and then be ready to demonstrate her ability to do this at the next session.

b) Remind parents of sounds that occur during the session that they do not notice.

c) Occasionally, parent advisor should obtain baselines of the parents when they are not aware (5-10 minutes). Then the parent advisor would indicate to the parents that she heard so many sounds during the last five minutes that they forgot to point out to their child. Then instruct the parents to listen during the next 5-10 minutes and point out all sounds to their child.

LEVEL 2: ALERTING - PRESENTING SOUNDS TO YOUR CHILD

A. Describe skill to parent:

1. What sound to use: Sounds that mother will have to produce (pans banging, turning on appliances, knocking, squeezing toys, etc.). These are not naturally occurring sounds, but sounds that mother makes intentionally.
2. Clues: Tell mother to "clue" child, "listen." In subsequent sessions, teach alerting without clues and then with distraction.
3. How to present sound: Close range (present sound within 5 feet) do not let child see the sound source.

4. What responses to look for: Child points to ears, facial expression, searching, etc.

5. What to do if child responds: Reinforce and show sound source.

6. What to do if child doesn't respond: Show child sound source. "Look, Johnny, I hear that - can you hear that?"

B. Parent advisor performs using only one sound source.

C. Mother performs using same sound source. Parent advisor reinforces mother's performance.

D. Discuss and challenge. Example of challenge: Make "pans banging sound" every day. If Johnny responds, reinforce and show him the sound. If he doesn't, show him the sound and say, "I hear that."

LEVEL 3 - LOCATING SOUNDS SOURCES

Level 3 - Location Sound Sources With Clues

A. Describe skill to parents:

1. What sounds: Mother can select any sound naturally occurring or sounds that she produces.

2. Clues: "Listen, Johnny." Have mother point to her ear or child's ears. Cock head. Pull hair away from ears, etc. Remember that in subsequent sessions the parent advisor would teach locating a sound source without clues. After the child can turn to a sound source without clues, the next step of locating a sound source with distraction would be introduced.

3. How to present sounds: Present all sounds within close range of the child; do not let the child see the sound source.

4. Responses to look for: Child turning to sound or otherwise locating source (runs to sound source).

5. What to do if child responds spontaneously: Reinforce child, show child the sound source.
6. What to do if child doesn't respond: Mechanically turn child's head to sound source; indicate, "I hear that."

B. Parent advisor then demonstrates skill of teaching a child to localize with clues using one sound source.

C. Mother performs the skill using the same sound source. Parent advisor points out positive aspects of mother's performance.

D. Discuss and challenge. Example of challenge: Each day present this one sound to your child. If your child does not turn to it, gently turn his head around so he can see it. Say, "I heard that." "Can you hear that?"

LEVEL 4 - DISTANCE HEARING

A. Parent advisor describes skill to parent:

1. What sounds: Naturally occurring sounds in the environment or sounds that mother can produce. "Knocking" is a good sound to begin with. The child will often want to produce the sound as well as listen for it. For example:
    a) mother knocks while child listens
    b) child runs to door when he hears the knock
    c) child knocks while mother listens
    d) mother runs to the door when she hears the child knock. "I heard that, Johnny." "I heard you knock."
2. Clues: "Listen, Johnny." Later on, see if the child can respond without clues and then with distraction.
3. How to present sounds: Start at distances fairly close to the child such as 3-4 feet from the child. Have the sound gradually further away from

the child. Move the sound source into adjacent rooms. If outdoors, have the sound originate from across the yard, across the street, etc.

4. Responses to look for: Head turns to sound, child runs to sound source, child points to sound source.
5. What to do if child responds: Reinforce; show sound source.
6. What to do if child doesn't respond: Turn child's head to the source or take the child to the source. If after a few more trials the child still does not respond, decrease the distance between the child and the sound source. Then try again.

B. Parent advisor models "distance hearing" to mother.

C. Mother performs. Parent advisor reinforces mother's performance.

D. Discuss and challenge. Example of challenge: Have someone knock when your child is at least 10 feet away from the person knocking. Before the person knocks, tell your child to listen. If he responds, reinforce him. If he doesn't, turn him around so he can see the knock. As the week goes by, increase the distance between the knock and your child.

LEVEL 5 - LEVELS OF HEARING

A. Discuss the skill with the parents:

1. What sounds:
    - a) natural sounds that occur above and below the child (airplanes, birds, clocks on the wall, electrical appliances up on shelves, sounds in the basement, etc.)
    - b) sounds that the parents can produce above and below the child. When this level is being introduced, have mother select one sound she can produce either above or below the child, such as pans banging, mother turning on water, mother knocking on a high window, etc.

2. Clues: "Listen" (point to child's ears). At a subsequent session, teach without clues and then with distraction.

3. How to present sounds: Have the child begin by sitting slightly above or below the sound (example: child sits on a table or shelf; mother sits below table or shelf with the sound source). Move quickly to presentation of sounds at increased levels such as having a brother turn on the t.v. in the basement or hammer in the basement. Before brother presents the sound, mother gives the child upstairs the clue to listen.)

4. Responses to look for: Child turns head to source or points to source or runs up or down to source.

5. What to do if child responds: Reinforce; show child sound source.

6. What to do if child doesn't respond: Turn child's head to source or in some way show the child the source. Repeat the stimulus. If still no response, decrease the distance between the sound and the child.

B. Parent advisor models "levels of hearing" to the parent selecting one level (above or below) and one sound.

C. Parent performs with same sound source. Parent advisor mentions strong points of parent's performance.

D. Discuss and challenge. Example of challenge: Have someone play your piano downstairs. Clue in the child before the sound. If your child responds, reinforce him and show him the piano. If he does not respond, take your child to the piano and show thim the sound. Try again. If he still doesn't respond, decrease the distance between your child and the piano (perhaps your child could stand 1/2 way down the stairs).

LEVEL 6 - GROSS ENVIRONMENTAL DISCRIMINATION

A. Describe the skill to the parents:

1. What sounds to use: Explain to the parent to begin with sounds that are very different. Such sounds would be:

   a) noisy vs. rhythmic sounds
   example: pans banging vs. steady knocking

   b) abrupt vs. continuous sounds
   example: door slamming vs. electrical appliance hum

   c) high redundant vs. low redundant
   example: clock (sound unit of "tick" is repeated) vs. kitchen timer (the sound unit "ding" on the timer is presented only once; it is not repeated).

   d) soft vs. loud
   example: t.v. at low volume vs. t.v. at high volume

   e) high vs. slow
   example: high chords on piano vs. low chords

   f) fast vs. slow
   example: spoon on pan (drumming fast vs. spoon on pan drumming slow)

   At the first session on gross environmental discrimination, have the parent select two sounds that are very different such as door slamming (abrupt) and water running (continuous). As the sessions progress, present sounds that sound more and more alike (for example, one noisy sound vs. another noisy sound). The child has to listen very carefully to make the discrimination.

2. Clues: Tell the child to listen carefully. At later sessions, drop clues. Then add distraction.

3. How to present the sounds:

   a) show the child the two sounds so he can pair the sounds with their sources.

   b) present the two sounds behind the child's back, one at a time; keep the sound sources as close together as possible.

4. Responses to look for:

a) Child will turn around and point or otherwise indicate which sound he is hearing.

b) Child will point to the correct picture from one of two pictures of the sound sources placed in front of him. Gradually increase the number of pictures to select from.

c) Child will demonstrate correct behavior such as answering the knock at the door or turning the blender off.

d) Child points to the correct noisemaker from a duplicate set of noisemakers in front of him and uses noisemaker appropriately.

e) In the case where the same sound source is being used such as soft vs. loud (t.v.), fast vs. slow (drum) or high vs. low (piano), the child will indicate discrimination by:

(1) soft vs. loud - putting finger over mouth (sh-sh) indicating soft; putting hands over ears indicating loud; extending arms wide to show a big, loud sound; holding hands close together to indicate a little soft sound, etc.

(2) high vs. low - child stands for high, squats for low; extends one hand high above the other for a high sound; one hand slightly above the other for a low sound; child can imitate, ie., he bangs on low chords after he hears low chord, high chords after he hears high chords, etc.

(3) fast vs. slow - child imitates (knocks slowly when mother knocks slowly, knocks fast when mother knocks fast), child associates a slow bodily motion (slow

swinging) when he hears a slow sound (music) and fast bodily motions (fast swinging) when he hears a fast sound (music), etc.

5. What to do if child responds correctly: Reinforce; "Good boy." "You heard that." "You heard the water."
6. What to do if the child doesn't respond: Show the child the sound so the child can again pair the sound with its source. Then repeat the discrimination task.

B. Parent advisor models the above skill to the parents using the child. Select two sounds that are very different. Show the child the sounds so he can pair them with their source. Give the child clues. Present one sound and watch for the child's response. Reinforce the child if there is a spontaneous response. If no response, show the child the sound again so the child can pair the sound with its source.

C. Parent performs the skill. Parent advisor reinforces strong points of the performance.

D. Discuss and challenge. Examples of challenge: Present two sounds that are very different (door banging - (abrupt) vs. water running (continuous). Show Johnny both sounds. Then turn his back to the sounds and present them one at a time. If Johnny turns and points to the right sound, reinforce him. If not, show him the sound and try again.

LEVEL 7 - GROSS VOCAL DISCRIMINATION - ONOMATOPOEIA SOUNDS

A. Describe the skill to the parents:

1. Sounds to use: All sounds used on this level are voice sounds. The parent advisor explains to the parent that some good voiced sounds to begin with are onomatopoeia sounds. These are vocal sounds that sound

like the real sound. Animal sounds such as moo-oo, bow-wow, meow, etc. are good onomatopoeia sounds. Vehicle sounds such as er-er-er, toot-toot, etc. are more examples of onomatopoeia sounds. Other onomatopoeia sounds include bang-bang (gun), pop-pop (pop corn), tick-tick (clock), ding-dong (bell), z--z--z--z (snoring), ring-ring telephone, etc. Have mother begin with two sounds that are very different such as:

a) noisy vs. rhythmic
example: baby's "wah!" vs. "hee-haw, hee-haw."

b) abrupt vs. continuous
example: "arf" vs. "moo-oo-oo."

c) high redundancy vs. low redundancy
example: "choo-choo-choo" (sound unit is repeated) vs. "toot" (sound unit is not repeated).

d) soft vs. loud
example: soft grr-rr-rr vs. loud grr-rr-rr.

e) high vs. low
example: high er-er-er (airplane high in air) vs. low er-er-er (airplane low in air)

f) fast vs. slow
example: fast choo-choo-choo vs. slow choo-choo-choo

To begin this level, have the mother select two sounds that are very different such as "choo-choo-choo" (high redundancy) vs. "toot" (low redundancy). Make sure mother has the sound source objects, i.e., the train (choo-choo) and the boat (toot!).

2. Clues: Use clues if necessary only. If the child is tuned-out, not listening, have the mother give a clue: "Listen, Johnny, listen, very carefully."

3. How to present the sounds: Pair the two vocal sounds (choo-choo and toot) with the objects (the train and the boat). Make sure the child has had sufficient pairing before you expect him to perform the

discrimination task. When the child is ready, present one vocal sound at a time. Either have the child's back to you or cover your mouth as you present the sounds.

4. Responses to look for:

   a) child will point to one of the two items (or pictures of the items) placed in front of him such as the boat or the train and/or

   b) child will imitate the sounds

   c) child will show correct behavior such as picking up the airplane and flying it through the air after hearing "er-er-er" or shooting the gun after hearing bang-bang."

   d) in the case where the same sound source is being used such as soft vs. loud (a soft and loud moo-moo), fast vs. slow (a fast and slow "toot-toot"), and high vs. low (the airplane sound), the child will indicate discriminations by:

      (1) soft vs. loud; putting finger over mouth (sh-sh) indicating soft, putting hands over ears indicating loud; extending arms wide to show a big, loud sound, holding hands close together to indicate a little, soft sound; pointing to a large animal for a loud, sound, a small animal for a small sound; imitating a loud sound vs. a soft sound.

      (2) high vs. low; child stands for high, squats for low sound; child moves hand high in air (perhaps with airplane in it) to indicate high sound, moves airplane down low to indicate low sound; imitates high vs. low sounds.

(3) fast vs. slow; child imitates fast sound vs. a slow sound; child taps finger or moves toy boat along or uses another body motion to indicate fast vs. slow.

5. What to do if child responds: Reinforce, "You heard the boat, good girl."

6. What to do if child doesn't respond" Pair the vocal sound ("toot-toot") with the sound source (boat) again. When the child has made the association, then repeat the discrimination task.

B. Parent advisor models this skill to the parents. Parent advisor selects two vocal onomatopoeia sounds that are very different ("arf" - abrupt vs. "moo-oo-oo-oo" - continuous). Parent advisor pairs the sounds with the sources so the child knows which sounds belong to which sources. Parent advisor presents the sounds one at a time so that the child cannot see her making the sounds. Parent advisor watches for an appropriate response from the child. If there is no response, parent advisor pairs the sound with its source again ("toot-toot" with boat). If there is a spontaneous response, the parent advisor reinforces the child.

C. Parent performs the skill. Parent advisor reinforces parent.

D. Discuss and challenge. Example of a challenge:

a) Present two sounds ("oink-oink-oink" and "arf") each day so that Johnny will know the "oink-oink" belongs to the toy pig and the "arf" belongs to the dog.

b) Later on in the week present these two sounds behind Johnny's back. Put the two toys in front of Johnny so he can point to the right toy when he hears the sound you are making. If he points to the right toy, praise him. If not, show him the toy again and give him the sound of that toy.

LEVEL 7 - GROSS VOCAL DISCRIMINATION - FUNCTIONAL WORDS WITH STRONG PROSODY PATTERNS

A. Describe the skill to the parents:

1. What sounds to use: Use functional words that have strong prosody (inflectional patterns). Such words as "no-no", "bye-bye", "all gone" are good because they have definite inflections (the voice goes up and down). The child's name is usually an excellent functional word to begin with; Steven, Johnny, Julie. Words such as "out", "run", "fun" (in isolation do not have strong prosody patterns and should, therefore, not be the first words used. To begin with, instruct mother to use function words that are very different.

   a) angry vs. pleasant
   example: "no-no" vs. "good-boy"

   b) varying number of syllables
   1 syllable vs. 3 syllables
   example: mine vs. no-no-no

   1 syllable vs. 2 syllables
   example: mine vs. no-no

   c) male vs. female
   example: dad calling, "Steven" vs. mom calling, "Steven"

2. Clues: Use clues only if necessary when the child is definitely not listening.

3. How to present the sounds: Bombard the child with the functional words throughout the day. Be sure to pair the words with a meaningful situtation i.e., "bye-bye" when you are going somewhere, "stop that!" when you are angry and want the child to stop. When you have stimulated the child with these words for many days, see if he can discriminate between the functional words (know which word belongs to which situation by listening only). Present one functional word such as "no-no" without visual clues.

4. Responses to look for:

   a) child will perform correct behavior i.e., stop when mother says, "no-no", wave when he hears "bye-bye" and/or

   b) imitate the functional words

   c) child will turn or point to correct source. (Example: mother and father are both in the room. Mother calls, "Steven." Steven turns to mother.)

5. If child responds correctly: Reinforce

6. If child doesn't respond: Pair functional word with correct behavior. For example, if child is kicking, mother restrains legs and says, "no-no" again (this time allowing child to see her mouth and facial expression), or pair functional word with the sound source. Show the child that mother called his name, not daddy.

B. Parent advisor performs this skill while the parents observe. Parent advisor should model:

   1) bombarding the child with functional words in meaningful situations and

   2, seeing that, after repeated stimulation, the child can respond appropriately to functional words without visual clues.

C. Mother performs skills. Parent advisor reinforces mother.

D. Discuss and challenge. Example of challenge:

   Week 1: Use the functional words "no-no" and "bye-bye" as often as you can. Remember to use these words in meaningful situation: "No-no" when you want your child to stop doing something; "bye-bye" when you are going somewhere.

   Week 2: When your child is not looking at you, present a functional word "no-no." If he stops, reinforce him for stopping ("thank you"). If he does not stop, stop him from doing and say, "no-no" again so he can see you.

LEVEL 8 - FINE SPEECH DISCRIMINATION - VOWEL STIMULATION & VOWEL DISCRIMINATION

A. Describe the skill to the parents:

1. Sounds to use: Mother selects one vowel per week such as (ē). Parent advisor then models various activities where mother would use this vowel in short one-syllable words. For example, if the vowel (ē) is selected, parent advisor would model such activities as these:

   a) getting dressed for bed using: knee, feet, sleep
   b) eating using: eat, meat, pea
   c) working in garden using: seed, weed, tree, bee
   d) riding tricycle using: beep-beep, whee!
   e) introducing pronouns using: you, me,we
   f) I see (key, t.v., teeth) game

   Each week the parent (with the help of the parent advisor) selects a different vowel and each week the parent advisor models activities that use words containing that vowel. Parent advisor should leave a word list in the home to remind parents what words to use constantly around their child. When the child has had sufficient exposure to several vowels over several weeks of time, mother will then determine if the child can discriminate between the vowels that the child has been exposed to. To do this, mother will select a few one-syllable words containing different vowels and different consonants (no vs. mine, eye vs. nose, tree vs. cake, go vs. stop). After the child has performed these discriminations, mother will then select 3-4 words with different vowels but the same consonants such as bee, bat, bow.

2. Clues: Use clues when the child is obviously not listening.

3. How to present the sounds: To begin with, mother will say, "Where is your eye?", "Where is your nose?", or "Go", then "Stop" (different vowels and different consonants). Mother will later say, "Show me the bat", "Where is the bee?", "Where is the bow?" (same consonant, different vowels). Tell mother not to draw attention to her mouth.

4. Responses to look for:

   a) child will show by appropriate behavior that he understands the word (go, stop, etc.)

   b) child will point to appropriate picture or object (bee, bat, bow) and/or

   c) child will imitate the word

5. What to do if child responds: reinforce

6. What to do if child doesn't respond:

   a) Pair the word with the behavior. "Stop, stop, Cathy" (restrain child from moving). "Now go, go, Cathy" (move child forward). Repeat discrimination task.

   b) Pair the word with the picture or object, "See the bee, that is a bee, a big bee."

B. Parent advisor models:

   a) How to use a specific vowel in various activities around the home.

   b) How to determine if the child can discriminate between various vowels after the child has been exposed to several different vowels.

C. Mother performs the skills. Parent advisor reinforces mother.

D. Discuss and challenge. Example of vowel stimulation challenge: Use the vowel (ō) in the following activities this week:

- a) "blow" - blow nose
  blow Tammy's birthday candles
  blow bubbles
- b) "come-go" (simple commands for Tammy)
- c) "high-low" (putting things away)
- d) bathing Tammy - "soap", "toe", "cold", "nose", etc.

Example of vowel discrimination challenge. Everyday ask Tammy to identify some words with different vowels but the same consonants. Use this week:

- a) "sack-sock" ("Tammy, where is the sack?" - "Where is the sock?")
- b) "ball-bell" ("Where is your bell?" - "Where is your ball?")
- c) "toe-tie"

Note: As the child learns to make one syllable discriminations, the number of syllables the parents use should gradually be increased, i.e., 2 syllables vs. 2 syllables; 3 syllables vs. 3 syllables.

LEVEL 8 - FINE SPEECH DISCRIMINATION - CONSONANT STIMULATION AND DISCRIMINATION

A. Describe the skill to the parents:

1. Sounds to use: Mother selects one consonant per week such as (s). Parent advisor then models various activities where mother would use this consonant in the initial position in short, one-syllable words. For example, if the consonant is (s), parent advisor would model such activities as these:

   - a) child is not feeling well: sore, sick
   - b) child planting garden: seed, sand, some
   - c) child is getting dressed: sit, stand, sock

d) mother is using foil in cooking - makes a snake that emits the (s) sound

e) hand soap, laundry soap, dish soap

f) child is eating: soup, some

g) child sings, sings, sings

Each week the parent (with the help of the parent advisor) selects a different consonant and each week the parent advisor models activities that use words containing that consonant (in the initial position). The parent advisor should leave a word list in the home to remind parents what words to use constantly around their child. When the child has had sufficient exposure to several consonants over several weeks time, the parent will then determine if the child can discriminate between the consonants that the child has been exposed to. To do this mother will select a few one-syllable words containing different consonants in the initial position but the same vowels (cat, hat).

2. Clues: Clues should be used only if the child is obviously not listening.

3. How to present the sounds: Mother will say, "Where is your cat?" "Where is your hat?" (Dr. Seuss's books, "Cat In The Hat" and "Cat In The Hat Comes Back" are good.) Mother should use amplified whispering frequently when presenting these words. When a person normally says a word such as "hat", the more intense vowel sound (ā) tends to mask out the consonant sound (h). If mother whispers the word (hat) the "h" sounds comes through while the vowel sound (ā) is suppressed. Remind mother not to draw attention to her mouth.

4. Responses to look for:

a) child points to correct picture or object (cat, hat) and/or

b) child imitates the words

c) child indicates by appropriate behavior understanding of words (stop, hop, etc.)

5. What to do if the child responds: Reinforce

6. What to do if the child doesn't respond:

a) pair the word with the picture or object, "That is the cat, see the cat."

b) pair the word with the behavior, "Hop, Tommy, hop, hop, hop like this." Now, "Stop, stop, like this." Repeat discrimination task.

B. Parent advisor models to the parent:

a) how to use a specific consonant in various activities around the home

b) how to determine if the child can discriminate between various consonants after the child has been exposed to several different consonants.

C. Mother performs the skills. Parent advisor reinforces mother.

D. Discuss and challenge. Example of consonant stimulation challenge:

Use the consonant (h) in the following activities this week:

a) "hi" everytime you see Cindy

b) hide (hide and seek)

c) high and low (putting things away)

d) help ("Will you help, Cindy?")

Example of consonant discrimination challenge: Every day ask your child to identify some one-syllable words with different consontants but the same vowel. Use this week:

a) cat, hat, bat

b) boy, toy

c) kite, light, night

Note: As the child learns to make one-syllable discrimination, the number of syllables the parent uses should gradually be increased. This will also facilitate discrimination of consonants in different positions in the words.

AUDITORY ACTIVITIES

These activities are for each of the eight auditory levels. It is not necessary for each child to go through each activity. Parents and parent advisors must select activities that are appropriate for the child and his family. Presenting natural auditory stimuli and pointing out natural sounds is of utmost importance. Activities and games should be considered supplemental to this.

ALERTING ACTIVITIES:

Note: In all these activities, the child is reinforced if he responds spontaneously to the sounds produced.

1. Put the child's fingers on his hearing aid and turn it off and on. Indicate "I can't hear; it is off," (shake head "no"). Then turn aid on "I can hear, yes; it is on," (shake head "yes"). Child indicates by facial expression or shaking head when aid is "on" or "off."
2. Introduce sound makers auditorily, visually, then tactically. For example, shake a rattle under a blanket or squeeze a noisy toy in a box. Clue the child in to "listen." Show the child the toy. Then allow the child to take the sound maker and make the noise himself.
3. Turn on the tap and have your child listen to the water running. Teach him

how to turn it ON and OFF. Shake your head "no" when the water is off and say, "I can't hear it." Shake your head "yes" and smile when the water is on and say, "I can hear that." Do this often until he can respond to the running water in the sink or bathtub. Use the radio and other appliances to turn on and off. Allow the child to indicate if the sound is "on" or "off".

4. Put an object in a box (oatmeal carton) with stockings around both ends. Shake the box and tell the child to listen. Then let the child stick his hand in the stocking and feel the object. Say, "What is that?" Make the sound again. Then show the child the object. Change objects.

5. Provide the child with a noise room (linoleum or tile floor). Give child blunt rubber hammer, empty cans, squeeze toys, cans of different sizes to stack and push over. Provide drums, bells, and horns, pop guns and musical instruments for older children.

6. Play peek-a-boo.
   a) Cover the child's head with a blanket. Pull the blanket up and say, "Boo!"
   b) Mother acts as if she is sleeping. The child is placed near mother. Mother awakes and says, "Boo!"
   c) Parents hide in the closet. When child is close, they jump out and say, "Boo!"
   d) Someone pretends he is sleeping (father). Mother takes the child's hand and tiptoes around saying, "Sh-sh-sh." Then, the mother and child walk to father who is sleeping and shouts, "Boo!" Father jumps up. Child is next placed on the bed. Mother covers the child's eyes (child is sleeping). Father creeps around, then moves close to child and says, "Boo!" Child responds (mother may need to remove hand from child's eyes to initiate a response for the first few trials. Then the child will respond on his own (i.e., open eyes, jump up, etc.).

7. Have mother put a clacker (metal insect, frog clackers, etc.) in the pocket of her apron. Periodically throughout the day, mother approaches child and indicates "listen." Mother makes "clacking sound." Then mother shows child the source.

8. Provide noisy toy for the child to play with. Pull toys are excellent. Empty cans attached with string make excellent "noisy" pull toys.

LOCATING SOUND SOURCE ACTIVITIES:

Note: In all activities, if child does not respond, his head is turned to the sound source or he is taken to the sound source. All spontaneous responses are reinforced.

1. Place the child on a chair or stool. Have one person stand behind the child with a noisemaker and make a sound. A second person stands in front of the child and tells the child to listen. If the child does not respond, the second person moves the child's head in the direction of the sound. Use edible reinforcers if necessary. Sound stimuli:

   a) toys
   b) environmental noises
   c) onomatopoeia sounds

2. Knocking Game: Mother goes behind a door. Child listens for mother's knock, turns to the door when he hears the sound and opens it. Mother greets the child animatedly. Child then knocks on the door and mother turns to the door and opens it. A treat behind the door with the person knocking adds incentive to listen.

   a) Sign on the front door, "Knock loud so (Johnny) can hear you too."
   b) When the child is outside playing, have family members knock on picnic tables, mail boxes, garbage cans that are close to the child. Tell the child to listen. Family members could use sticks to knock on garbage cans. When child locates the "banging", he can bang on the can with the stick.

c) Knock under the child's high chair tray.

d) Always knock when going into the room where the child is playing.

e) Knock before getting into the car. Did the child locate the knock. Let the child knock.

f) Place the child by a low window. Turn his back to the window. Have a person go outside and knock on the window, quickly ducking so child can't see him. Child hears the sound and goes to the window. The person who knocked jumps up and exclaims, "Hi!" The novelty of a head popping up is good incentive for the child to listen for the knock again.

3. Where Is That Sound Coming From At Mealtime

a) Different family members knock under the table. Child locates "knock."

b) Family members bang utensils under the table. Child turns to family member who is banging.

c) Tap pans on the table. Child turns to the sound.

d) Hide a small noisemaker (kitchen timer, alarm) under one of the turned-over soup bowls. When sound occurs, child locates it.

4. Hiding Environmental Noises

a) Hide blender, portable t.v., hot air comb on sounding board, shaver, radio, tape recorder, etc. fairly close to the child. Have the child find the noisemaker.

b) Introduce one room at a time. For example, in the bedroom hide the alarm clock or radio. In the bathroom hide the shaver, electric toothbrush or air comb. In the kitchen hide the blender, can opener, timer, mixer, etc.

c) Get several chairs and cover them with blankets. Hide a sound under one blanket on one of the chairs. Have child go to the correct sound source.

d) Make a road either on poster board or by setting up a course on the rug. Drive any mobile toy (car, etc.) over the road. Have different sounds hidden enroute behind pillows, etc. Child can stop, listen and locate sound. Hide blender, alarm clock, radio or tape recorder with sound on it.

5. Balloon Game: Pop balloons or sacks behind child. Child turns. Reverse so child can pop the balloon or sack.

6. Peek-a-boo: Mother hides under blanket. When child is near she pulls off blanket and says, "Boo!" Child turns to the "boo."

7. When the child is in the bathroom, mother turns on tub, or sink, or shower, or flushes toilet. Child turns in proper direction.

8. Family members close books loudly. Child turns.

9. Boo Game: Several people play this game. One person is "it." "It" points to someone (the child). The child closes his eyes. "It" moves to a new spot and says, "Boo!" After hearing "boo" the child opens his eyes and turn to "it."

10. Folding Clothes Game: Mother hides alarm or other small noise maker under one of the piles of clothes. Child turns in proper direction. Mother gets the small noisemaker out from hiding and shows it to the child.

11. Name Calling Game: Mother stands behind child's back and calls child's name. Child localizes to mother's voice. Child stands behind mother's back and makes a sound. Mother turns to the child's voice.

    a) Brothers and sisters hide in unmade bed and call to the child who is close by. Child turns to their calling.

    b) Parents hide under blankets. Call child. Child finds the parents who are hiding.

    c) Dad comes home, sticks head in and calls to child who is nearby. Child localizes to dad.

    d) Family members roll up in blankets. One calls child's name. Child turns to or falls on family member who is calling.

e) Family members hide behind furniture close to the child and call the child's name. The child finds the family member who is hiding.

12. Friends or relatives call on phone (pre-arranged) while child is close to the phone. Child turns to the ring. Arrange for someone to ring the doorbell. Child turns to the "ring."

DISTANCE HEARING ACTIVITIES

1. Knock at increased distances from different rooms.
   a) Parent advisor should knock on the door when she comes for her visit. Or, if the child is playing outside, the parent advisor can knock on a window.
   b) Knocking on the door can be done with this slight variation. Have the child's pet or his favorite toy behind the door with the person knocking. Or, the person knocking can wear a mask. This adds incentive for the child to listen and go to the sound source.
2. Hide in another room and blow a whistle until the child finds you.
3. Name calling at increased distances:
   a) Mother calls the child's name or "where are you" throughout the day.
   b) Call child to dinner.
   c) Parents hide in a different room (behind chairs, under blankets) and call to the child. Child goes into the room and finds parents.
   d) Mother calls across the lawn to the child when the child is not looking. If the child responds (turns to mother) mother may want to reinforce by throwing a kiss or going to the child and hugging the child, saying, "Good girl, you heard me."
4. Family members hide noise makers in different rooms. Child listens for the sounds, goes to the appropriate room and locates the noisemakers; tape recorder, radio, portable t.v., alarm clock, blender, timer, and other noisemakers could be used.

5. Dad "honks" the car horn when he returns home. Brothers and sisters should honk bicycle horns. Have dad throw rocks at fences, barns, etc. Child runs to these sounds.

6. Family members call attention to all distant sounds. The child runs to the source, points to the source, turns to the source, etc. Possible sound stimuli:

a) cars honking - trucks passing
b) children shouting
c) lawn mower outside
d) phone ringing
e) doorbell ringing
f) stereo, t.v., radio, other musical sounds
g) doors banging

7. Frog Jump Game: Mother jumps like a frog further and further away from the child. After the mother has jumped so many feet away from the child (her back to the child) she pauses and say, "Go." Child hears the "go" and drops a marble in a can, puts a ring on a peg, or jumps in imitation of mother. Mother jumps out even further from child and repeats. After the child has responded correctly to mother at varying distances, the child jumps away from mother. Mother calls to the child. The child turns and looks at mother.

8. At mealtime whenever someone leaves the table to get something, that person must make a noise (utensil banging) in adjacent room before returning to the table.

9. When the child is being toilet trained, have mother leave the bathroom and go beyond the bathroom door. Mother makes animal sounds. Child turns to the sounds. Mother pops toy animals or animal puppets around the corner of the door and repeats animal sounds. This provides good incentive for the child to listen for the animal sounds and turns to them. Mother may want to just "call" child's name. When child looks to the door, mother pops head around corner of door and says, "Hi!"

10. Mother and child roll or throw a ball between them. Mother covers mouth and says "go" to indicate that the child is to throw ball. Distances between mother and child are increased.

LEVELS OF HEARING ACTIVITIES:

1. Point out sounds in the basement or upstairs (go to the source). Point out sounds under the table when eating such as the dog barking, feet stomping, someone knocking under the table. Point out electrical appliances in cupboards. Point out the sound of the clock on the wall.

2. Put the child on the table. Mother sits below the table and makes a sound (pans banging, etc.) Child looks down to the sound. Mother and child change places. Mother makes the sound above the child and he looks up to the sound. Then the child produces the sounds while mother listens.

3. Have the child on a stairway and someone above him and below him. The child must turn to the person who made the noise.

4. Call the child's name from various levels.

   a) Climb trees, ladders, fences, picnic tables and call the child's name (or even climb on the roof).

   b) When the child is in his high chair, mother crawls around on the floor. Mother calls to the child.

   c) When mother is on a stool or kitchen ladder she calls to the child.

   d) Play hide and seek: Mother crawls into high or low places and calls the child's name. The child finds mother. Then someone hides the child (top of couch, high safe shelf, attic, hamper, etc.) Child calls to mother and mother finds him.

   e) Horsey Back Ride: Child rides on one person's back. A second person hides in the room (under a chair). The second person calls out to the child. If the child does not turn on his own, the horsey (second person) gallops over to the sound source.

5. If the family lives in apartments and neighbors will co-operate, have the neighbors knock on the floor, play the piano or stereo, etc. Take child to the source. Also in apartments or other multi-storied buildings, point out to the child cars and other sounds below.

6. Hide noisemakers above and below the child (in cupboards, under furniture, in basement, on top of high pieces of furniture, etc.).

7. Go on a listening nature walk. Point out birds in trees, high construction work, etc.

8. Point out all airplanes to the child. Go to the airport. Let him hear the sounds of the airplanes as they get higher and higher.

9. Stair Game: Child is at the bottom of the stairs. Mother is at the top. Mother's back is turned to the child. She says "go" or calls the child's name and child climbs up. Mother then changes places with the child. She is at the bottom, he is at the top. Mother calls again and the child climbs down the stairs. Reverse roles so child is calling and mother is climbing.

GROSS ENVIRONMENTAL DISCRIMINATION ACTIVITIES:

1. Present various environmental sounds throughout the day. Make sure you show how the sounds are used (pick up the telephone, go to the door and open it, put food in the blender, use the hot air comb, etc.). Sounds must take on meaning. After the child has had exposure to environmental sounds, present two sounds for him to make discriminations. Begin by presenting sounds that are as different as possible (see suggestions below). The child should respond by pointing to the correct source (he hears a hum and points to the fan). Or he may demonstrate correct behavior (he hears a knock and goes to the door). It may be necessary to actually help the child through the appropriate behavior if he only localizes to the sound.

Present these sounds:

Rhythmic vs.	**Noisy**	**Abrupt** vs.	**Continuous**	**High Redundant** vs.	**Low Redundant**
a) drum (boom, boom)	a) egg beater against pan	a) door slam	a) alarm clock	1. bicycle horn (beep beep, beep)	1. kitchen timer (ding)
b) cymbals (repeated clangs)	b) machines or electrical appliances such as mixer, lawn mower	b) horn beep	b) water running	2. toy train or boat (toot, toot, toot; choo-choo-choo)	2. whistle (toot)
c) hitting lids together (repeatedly)	c) stacked cans falling down	c) object falling to floor	c) electrical appliances (blender, vacuum, etc.)	3. clock (tick, tick)	3. one sound unit from toy trains, boats, etc. ("toot", "ding")
d) clapping	d) blocks falling	d) object falling down cardboard tube or into cup or bank	d) humming in tube or into comb covered with wax paper	4. play telephone (ring, ring as you turn dial)	
e) maracas (shaking them rhythmically)		e) dog bark	e) sustained note or any musical instrument		
f) flute or other instruments (toot-toot)		f) noisemakers (shakers, clackers, buzzers) if the sounds are made just once	f) telephone ring		
g) tamborine (if shaken rhythmically)		g) possibly doorbell	g) possibly doorbell		

2. Put on some music (radio, stereo, piano, etc.) Clap hands, pat tummy, flap arms like a bird, stamp feet, swing, hop, turn around to the rhythm of the music.

a) Sing, whistle to the child while you dance with the child.

b) Have a family rhythm band. (Use play horns, pans banging, drums made out of oatmeal boxes, sticks, bells, etc.) Introduce different bodily motions to the beat.

c) Lay the child on parent's hands (stomach of child down). Child is now an airplane. Parents move child up as the "errr" goes up and down as the "errr" goes down. Go fast and slow.

d) Put child on your lap. Sing, do nursery rhymes as you provide accompanying bodily motions.

3. Have child's back to you. Drop blocks or marbles in a can (or pennies in a bank). You may drop one penny, or two pennies, or three pennies at a time. The child then imitates you, i.e., drops one or two or three pennies or blocks into his can or bank. Go fast and slow.

4. Have the child sit back to back with the parent advisor. They both beat on a drum made from an oatmeal box. The child follows the rhythm the parent advisor beats. The parent advisor then follows the child.

GROSS VOCAL DISCRIMINATION ACTIVITIES (Onomatopoeia):

1. Beginning with sounds that are very different, imitate animal, vehicle, and other onomatopoeia sounds in the child's environment. (See 1 a,b,c,d,e,f, under Level 7 - Gross Vocal Discrimination - Onomatopoeia Sounds, p.104). For example, when mother is popping corn she says "pop, pop" or when the dog barks, mother says, "arf-arf."

2. Play with sound toys (cars, boats, trucks, animals, etc.) Have the parents

play with the toys and imitate the sounds they make. The child then imitates the sounds before he can play with the toys or imitates the sounds as he plays with them.

a) Have a box (a letter file box with a handle is easy to carry). Fill it with a variety of sounds. Keep them categorized. This can be done by putting each category of sounds in a plastic bag. Use one category at a time, such as farm animal sounds. Then use one animal at a time such as a cow - "moo". Do not let the child see the animal. Let him listen. After he has heard the sound, have him imitate the sound back. If he can, praise him. Let him see the animal. If he cannot, show him the animal and let him feel it. Then make the sound again. Let him play with the animal for a while. When it is time to introduce a new sound, say, "by-by cow" and return the cow to the bag. Present only one sound at a time. Continue with this listening activity using several different categories such as toy cars, airplanes, zoo animals, etc.

b) (Rug City) Rug cities can be purchased or home-made. When the child imitates the noise of a toy, he can play with it on the rug city.

c) (Fisher-Price toys) When the child makes the sound of the toy vehicle, then the child can put the little person in it and play with it.

d) Find or build a toy milk truck. Deliver milk to different houses. Use pictures of family members on the houses. The milk truck goes - er-er-er-er. The bottles go clank-clank or clink-clink.

e) Use a car or truck and a garage. After the child makes the noise of the vehicle, then he can drive the car or truck into the garage. (Garages can be made from cracker boxes.) Have the car or truck go to a gas station and fill-up with gas (z-z-z-z-z). (Gas stations and pumps can also be made from boxes of various sizes.)

f) Obtain a large box, cut holes in both ends. Mother sits at one end, the child at the other. Mother puts several toy animals or vehicles in the box. She reaches in and pulls one toy out making the sound "moo-moo." When the child imitates the sound, mother moves the toy up and over the box to the child's end. The child then selects a toy, makes the sound, mother imitates and the child moves the toy up and over the box to mother's end.

g) Have a long box with holes down the box. Glue pictures of objects that make onomatopoeia sounds under the holes, (bell, ding-ding; popcorn, pop-pop; clock, tick-tick; bee, buzz-buzz; gun, bang-bang; animals, vehicles, etc.) When the child imitates the correct noise of the picture, he reaches in the hole and pulls out the object to play with.

h) Have several toy animals. The mother makes one of the animal sounds. The child correctly imitates the sound and feeds the toy animal a cheerio or a piece of candy, or put a toy animal by the child when he eats. The mother makes the sound of the animal because the animal is hungry. The child imitates the sound and pushes the animal close to his dish. Then the child makes the sound of the animal eating (smacking lips several times).

i) Use puppets with mobile mouths. As you make the sounds, open and close mouths.

j) Mother and father dress up like animals (put on paper ears and nose or put paper sacks over head which are decorated like an animal). Then make the animal sound.

3. Have the child point to the correct picture or object after hearing the sound.

a) Play "lotto" or "lingo." These games are commercially available or can be made. A board with several pictures on it is needed. The pictures are of animals, vehicles, other "onomatopoeia" objects. Mother makes a sound. The child points to the correct picture or covers the correct picture with a marker.

b) The child listens for a sound and points to the puppet, toy or real object placed in a series in front of him. Mother should make the sound "under her hand" or turn the child around so his back is to her.

c) The child, after hearing a sound, points to the correct picture from a series of pictures in front of him. You may try this variation. Have a string, rope or clothes hanger with clothes pins on it. Glue pictures of animals, people, vehicles or other objects on 3x5 cards. Keep the cards in categories. Child listens to a sound that mother makes. He finds the correct picture and hangs it up. When 4 or 5 cards in a category are hung, take them down and begin another category.

4. Use "ear books" and "sound books." Parents make the sounds. The child imitates the sounds or points to the correct pictures. Sound books available are:

   1. "I Hear" Lucille Ogle, Tina Thoburn, American Heritage Press, New York.
   2. "The Ear Book" Al Perkins, Random House, New York.
   3. "What Do I Hear" Golden Press Western Publishing Co., Inc., Racine, Wis.
   4. "Mr. Brown Can Moo, Can You?" Dr. Seuss, Random House, New York, 1970.

GROSS VOCAL DISCRIMINATION - FUNCTIONAL WORDS:

1. Have snapshots of each member of your family. Bring them out daily and talk about them, "Mama, daddy, Stevie, etc." Ask your child to identify each member: "Show me daddy", "Where is mama?"

2. Blow up a balloon. Say, "up-up' or "some more" as you pause for breath. Then blow the balloon some more. Encourage the child to say "more" or "up-up". When he imitates "up-up" or "more", blow more air into the balloon. "Down, down" can also be used when the air is being released. These words can also be used with:

a) pouring milk or water into a glass

b) stacking cans or blocks

c) threading beads on a string

d) toys with mobile parts (such as the Fisher-Price garage with car lift or the stairs) to illustrate the concepts of "up, up" and "down"

e) moving a paper cup up and down a string

f) dropping pennies in a bank, frosting cookies, putting stickers or stars on paper, etc. used with the word "more"

g) putting "more" water in the bathtub or more bubble bath

h) putting "more" water, soup, dishes, into the sink; more clothes into the hamper or washer; more food on a plate, etc.

3. Hide and Seek: Mother says, "Bye-bye." Child turns and hides eyes or leaves the room. (Child may need help of a second person.) Mother hides. She says, (from hiding) "All gone." "Mommy is all gone." "Find mama." Child goes to Mommy. Mommy says, "Boo, I see you." Change places.

4. Play Peek-a-boo game: Put a towel, sack, blanket, etc. over the child's head; then over mother's head. Use the words "all gone", "peek-a-boo." Vary inflection - say them high, then low. Encourage the child to imitate.

5. Draw a picture of a smiley face and a frowney face. Place the pictures before the child. Call the child angrily. Child points to frowney face. Call child gaily. Child points to happy face. Reinforce "good boy." Or child may indicate by correct behavior (laugh, cry, quizzical look, etc.) according to the emotion in the voice.

6. The child must discriminate between varying number of syllables such as jump (child jumps once) vs. jump, jump, jump (child jumps three times). Hop, turn, kick, step, knock, tap, go, etc. are words that could be substituted for jump. See if the child can discriminate between words like "no-no-no" vs. "mine";

"up, up, up" vs. "stop" by the child showing correct behavior. Note: It is often helpful to tap child's arm or chin when first introducing varying syllables.

7. Child discriminates between open and close. Mother says, "open." Child opens mouth, or opens closet, book, box, sack, refrigerator, etc. Mother says close and child closes object. Reverse roles.

8. Functional words like "go", "stop, stop", "eat", "yum-yum", "sit down", "stand up" are good to use. If the child does not perform the correct behavior, remember to help the child through the behavior (sit the child down, stop the child). Encourage the child to imitate.

9. Child discriminates pitches:

a) Mother calls the child. The child turns and points to the mother or to a picture of mother in front of child. Father then calls the child. The child points to father or a picture of father.

b) Mother says some functional words like "how are you", "I love you", "good girl", "come here" very high and then very low. Child indicates highness and loudness by arms extended high for high words, arms extended low for low words or standing for high words, squatting for low words, or drawing high line for high words, low line for low words. (If mother has a continuous voice with changing pitch, child draws a continuous line, moving the line when mother goes high and then drops the line low for the low words.)

10. Mother makes functional words soft, then loud - "Ma-ma", "Da-da", "Johnnie", etc. Child covers ears when words are loud, put finger over mouth and indicates "sh-sh-sh" when words are soft or the child's hands indicates big (loud) sounds vs. little (soft) sounds.

11. Put several pictures in front of the child such as a person waving, "bye-bye", picture of mommy, daddy, picture of person hiding ("all gone"), person sitting

("sit down"), etc. Mother says a functional word behind the child's back or she covers her mouth and the child points to the correct picture.

FINE SPEECH DISCRIMINATION ACTIVITIES:

1. Mother uses one-syllable words with different vowels and consonants. She uses connected speech (short sentences) but emphasizes the one-syllable words. For example:

- a) "in" vs. "out"
    1. food "in" and "out" of the stove, refrigerator, cupboard
    2. parents and child going "into" and "out" of rooms, cars, boxes, play tents (blanket over chairs), beds, etc.
    3. dishes, clothing, utensils, toys, etc. "in" and "out" of closets cupboards
    4. getting dressed (hands "in" mittens, feet "in" shoes, etc.); getting "in" and "out" of bathtub
    5. moving play people or animals "in" and "out" of toy cars, toy houses and garages, toy barns.
- b) "come" vs. "go"
    1. going to various places (store, church, etc.)
    2. commanding toy people or animals, "go", "come". Then moving the toys.
    3. mother calling to child throughout day, "come." Then telling child to "go."
- c) "stop" vs. "go"
    1. Mother holds a cookie sheet at a slant. Mother covers her mouth and says, "Go." The child lets the car go down the cookie sheet and onto the table. Mother says, "Stop", and the child

puts his hand on the car to stop it. This can be used with mother signifying "go" and "stop" for other actions such as running, dropping marbles in a can, riding a trike, etc.

Stop and Go Game: If more than two people play, one person is IT, and the others go stand behind the starting line. IT turns around and says, "Go." IT must say, "stop" before he turns back around. If IT sees anyone moving after he turns back around, that person must go back to the starting line. The first person to touch IT wins and becomes the new IT.

There are many, many more: sit vs. stand, yours vs. mine, car vs. truck, hand vs. arm, eat vs. play, run vs. hop, tree vs. sky and on and on. When the child can "hear" the differences between many one-syllable words with different vowels and consonants and responds appropriately, the mother then emphasizes one-syllable words with the same consonant but different vowels in her daily conversation (cake, cook, coke; bite, boat, beet, etc.) When the child can hear these differences, mother then emphasizes one-syllable words with the same vowels but different consonants, (hit, hat, heat; try, tree, tray, etc.)

2. Follow the Leader:

   a) Mother says words with different consonants and vowels such as jump, stand. The child obeys. Mother imitates child's behavior, i.e., she sits after the child sits. Make sure mother says the word either behind the child's back or have her cover her mouth.

   b) Mother uses words with the same vowel but different consonants for consonant discrimination such as: walk vs. talk, clap vs. tap, sit vs. hit, lay vs. say, jump vs. thump vs. bump, stop vs. hop, lick vs. kick, sing vs. ring, on vs. off. Child performs correct behavior. Mother imitates child's behavior.

c) Mother uses words with the same consonant but different vowels for vowel discrimination such as: say vs. see, bite vs. bat vs. beat, look vs. lick, bye (child waves) vs. bow (child bows), fall vs. feel, point vs. paint, stop vs. step, etc. Child performs correct behavior. Mother imitates child's behavior. Encourage the child to imitate these words. Reverse roles. Have the child command the mother. For example, the child must say, "on" before mother turns on the water. Or have the child and the mother in a dark room. Child says, "on" and mother quickly turns the light on. Child says "off" and mother turns off the light.

3. Several pictures are placed in front of the child (key, knee, pea, bee, tree, etc.) Mother says one word behind the child's back or covers her mouth while saying the word. Child points to the correct picture.

4. Lotto or Lingo (commercially available games). Mother says a word. Child covers appropriate picture with a marker and imitates the word.

5. Mother says a word (bat, beet, boat, boot). Child points to the correct object from a series of objects in front of him.

6. Child on dad's back (piggy back). Dad says a word. Then child imitates (the discrimination task). Then dad runs the child to the object he was naming (to attach meaning to the word). For example, dad says, "boot", child imitates and dad runs to the child's boot in the closet. Dad then repeats, "Boot here is your boot," as he shows the child the boot. Then dad says, "boat", child imitates, and dad runs to the child's boat.

7. Child points to the correct picture in a book that the parent is naming. "Cat: vs. "hat" ("Cat In The Hat", Dr. Seuss), "Sam vs. Ham" ("Green Eggs and Ham", Dr. Seuss).

8. Phrase Discrimination.

a) Child shows discrimination of phrases dissimilar in length by pointing to long or short phrase after hearing mother give a phrase (mother covers mouth). The child will attempt to imitate the phrases for phonemic discriminations.

TOTAL COMMUNICATION

Background

Deaf parents with deaf children naturally want their children to develop the same communication system that is used in the home. For most deaf people this is total communication. Some hearing parents also prefer total communication from the beginning. However, the main need for a total communication program has come from a need for those children who do not have the residual auditory capacity to develop language through amplification. As a result of these three sources, a total communication program is a necessary, desirable part of a parent-infant program.

Evaluation for Total Communication

For those parents who request total communication at the commencement, the child is started in a total communication program. An important component of any program is an on-going communication evaluation which evaluates the child's communicative development. When a child is not developing communication and thus language, he is evaluated to determine the source of the problem. In most cases the child does not have the auditory capacity to develop language through amplification. The child is usually recommended for Total Communication.

If parents accept the recommendation, the program begins. Parents and the child continue to participate and receive all the services the auditory children received plus a Signed English program. The parents and child learn to use total communication in their daily communications in the home. Total communication becomes the language of the home. The family uses this system in all of the language activities previously described. The vehicle to develop these total communication skills is a unique video tape program which is described below.

Video Cassette Tape Program Rationale

In order to effectively teach families total communication, it is necessary to give them constant daily exposure to the signs. The video cassette program enables the parents to slip a cassette tape into a playback unit, turn their family T.V. on, and view the signing lesson as many times during the week as they desire. Because each family has different needs (some need a lesson if someone in the family is having a birthday), different lessons can be given to the family based on those needs. The program also provides for: (1) close-up viewing of the signs so that precise configuration, motion and placement can be seen (2) signs in motion (not static as in a book) (3) built in evaluations and applications that are not possible in a book; applications are not possible in a class.

The teaching of traditional sign language classes presents some problems. The distance some parents have to travel poses a problem. Parents enter the program at different times and it is difficult to deal with the new-comers in the class since they had not learned the signs from the first lessons. Many parents enter a parent-infant program before or after the class is taught and of course miss the vital training they need. Varying proficiency levels of parents in a class is another problem. In short, it is difficult to meet the individual needs of families by conducting signing classes.

A video cassette program solves these problems. Families can begin the tapes as soon as they enter the total communication program and can use the tapes on their own proficiency levels.

Description of the Video Cassette Program

There are 56 total communication lessons. Three of the lessons are instructional. The instructional lessons include the manual alphabet, to-be verbs, pronouns, affixes and question words.

Twenty-two of the lessons are activity lessons built around the same activities used in the language program. Six of these lessons deal with child-care activities (dressing, eating, going to the bathroom). Seven lessons are concerned with parent-oriented activities such as cooking, cleaning and gardening. Five of the lessons are about such child-oriented activities as playing with dolls and trucks. Four lessons are about semistructured activities such as coloring, story telling and counting.

The remaining lessons are subject lessons. These lessons deal with subject areas such as food, time, color, medical, religion, nature, transportation and animals.

The format for each lesson is as follows:

a. Presentation: The configuration, position and movement of each sign is given. Hints are given to help the families remember the signs.

b. Evaluation: For the receptive evaluation, the family goes back to the beginning of the presentation portion and turns off the sound. This tests their ability to understand the sign without sound. In the expressive evaluation, the sign is given verbally (and graphically on the screen); then there is a pause of time for the family to make the sign. Finally the sign is given so the family can check to see if they made the sign correctly.

c. Application: The signs are used in real-life situations such as cooking in a kitchen, going shopping, and mealtime. The instructor uses the signs with a child participating in the activity.

There are twenty to thirty signs taught per lesson in the instructional and activity lessons. Eash lesson is ten minutes long. There are three lessons on one tape (video cassette cartridge).

There are sixty to seventy signs taught per lesson in the subject lessons. Each lesson is fifteen minutes long. There are two lessons on one tape. These lessons have a presentation and evaluation portion but not an application.

Tape lessons in the Total Communication Program

TAPE 1

Lesson 1: Manual Alphabet
Lesson 2: To-be verbs/Pronouns
Lesson 3: Affixes/ Question Words

TAPE 2

Lesson 1: Changing Diaper
Lesson 2: Going to Bed
Lesson 3: Getting Dressed

TAPE 3

Lesson 1: Going to the Bathroom
Lesson 2: Getting a Drink
Lesson 3: Mealtime

TAPE 4

Lesson 1: Cooking
Lesson 2: Washing Dishes
Lesson 3: Washing Clothes

TAPE 5

Lesson 1: Sewing
Lesson 2: Cleaning House
Lesson 3: Going Shopping

TAPE 6

Lesson 1: Gardening
Lesson 2: Child hurts Himself
Lesson 3: Girl Playing Outside

TAPE 7

Lesson 1: Boy Playing Outside
Lesson 2: Girl Playing Inside
Lesson 3: Boy Playing Inside

TAPE 8

Lesson 1: Puppets
Lesson 2: Counting, Coloring, Cutting
Lesson 3: Follow-the-Leader

TAPE 9

Lesson 1: Story telling (Opposites)
Lesson 2: Playthings
Lesson 3: Prepositions
Lesson 4: Sports

TAPE 10

Lesson 1: Body Parts
Lesson 2: Clothing

TAPE 11

Lesson 1: Holidays
Lesson 2: Medical

TAPE 12

Lesson 1: Money
Lesson 2: Work, Jobs, Professions

TAPE 13

Lesson 1: Animals, Part I
Lesson 2: Animals, Part II

TAPE 14

Lesson 1: Food, Part I
Lesson 2: Food, Part II

TAPE 15

Lesson 1: Related Food
Lesson 2: Household Items

TAPE 16

Lesson 1: People
Lesson 2: Places and Directions

TAPE 17

Lesson 1: Time
Lesson 2: Religion

TAPE 18

Lesson 1: Outdoors
Lesson 2: Elements and Tools

TAPE 19

Lesson 1: Measures, Numbers, and Sizes
Lesson 2: Transportation and Motion

TAPE 20

Lesson 1: Feelings and Emotions I
Lesson 2: Feelings and Emotions I

TAPE 21

Lesson 1: Sounds
Lesson 2: School

TAPE 22

Lesson 1: Adjectives, Adverbs, and Connectors
Lesson 2: Verbs I (Strong Action)

TAPE 23

Lesson 1: Verbs II (Minimal Actio
Lesson 2: Verbs III (Minimal Action)

Selection of Signs for the Tapes

The text, "Signing Exact English" by Gerilee Gustason and others was selected because of: (1) extensive base vocabulary (2) good, extensive affixes and (3) good expansions. Many revisions and new signs were necessary, however, so that signing would be done by concept. For example, rather than having one sign for all the different "turns" or "runs", a sign was developed for each different "run" concept and "turn" concept. As much as possible original American Sign Language signs are used. New signs were made up when no signs were given in the text. These signs were based on the expansion theory whenever possible. For example, if the text had a base sign for "tree" but not for bark, trunk, or limb, the base sign "tree" would be used and then slightly revised or "expanded" to make new signs for "limb," "bark," and "trunk." A committee to decide on the signs to be used was appointed. It was composed of representatives from Project SKI*HI, Utah School for the Deaf Pre-School, and a deaf adult who is an educator.

After parents have completed the functional and instructional word lessons, they select video lessons from the activity units. When these lessons are completed, they select lessons from the subject lessons. In all of these lessons, there are close to 3,000 signs that the parents will be learning. Many of these signs will be remembered and used. Many will not since it is difficult to remember all of these signs, even after tape presentations and evaluations.

At the end of the time the parents complete a tape of new signs, the parent adivsor will leave them a hand-out listing the signs covered and describing how the signs are made. These handouts will be accumulated and will become a reference manual to accompany the tape lessons.

The handouts will be placed in three-ring binders purchased by the parents so by the end of the tape series, they will have a manual to refer to every sign covered. Some parents will be "graduated" and accessibility to tapes will be limited. Some parents will forget signs covered 50 lessons ago and will need a quick reference.

Use of the Tapes in the Home Visit

A list of the signs in each lesson are given in the order they are presented on the tape and is given to the parent advisor before he or she gives the tape to the family. In this way, the parent advisor plans appropriate activities with the family using the signs. She can also use the list to make sure she knows all the signs in the lesson before presenting it to the family.

The tapes are not to take the place of the language activities in the home visit. They are to train the family to use signs so the family can participate appropriately in the language activities. A typical plan would be for the parent advisor to assign the parents to view one lesson and obtain 80-100% scores on the receptive and expressive evaluations by the next session. If this is done, the parents would then apply the signs from the lesson in real situations while the parent advisor would monitor their effectiveness. An evaluation a few weeks or months later would determine the parent's retention of the signs and their use of the signs in the home.

Word lists of each lesson are given to the deaf families since the presentation portions of the tapes are auditory. The deaf families use the lists to know what signs are being presented on the tape. The evaluation for deaf families is the same since the signed word is presented on the screen during the evaluation.

After viewing a tape, the parents are given a handout, describing the signs made on the tape. They can then have the signs in written form to refresh their memories if they should forget a sign.

Materials and Equipment

The total communications lessons were produced in a format which allowed for teaching families right in their homes on their own television sets. The format chosen, based on cost of production of lessons and cost of playback equipment, was the 3/4" U-matic video cassette system. It was determined that this format would remain the standard in industry, offer maintenance free performance, and a longer life expectancy for the cassette tapes.

The lessons were recorded and dubbed under a contract with a professional recording studio to assure a professional end product. The instructor was provided by Project SKI*HI staff.

Hardware consists of five video playback units and one recorder. Four copies of the tapes were made.

COMMUNICATION PROGRAM

Rationale:

Effective interaction between the mother and child is of utmost importance if language is to develop in the hearing impaired child. The child is not a language learner but rather a dynamic partner is a two-way communication system. The child has intentions to be expressed through a variety of means (gestures, facial expressions, vocalizations). If parents are sensitive to these expressed intentions and respond to them, the child will develop a communication system. Verbal or signed language can then be plugged into this communication system. If the child does not develop a communication system, he will not develop normal language.

Description:

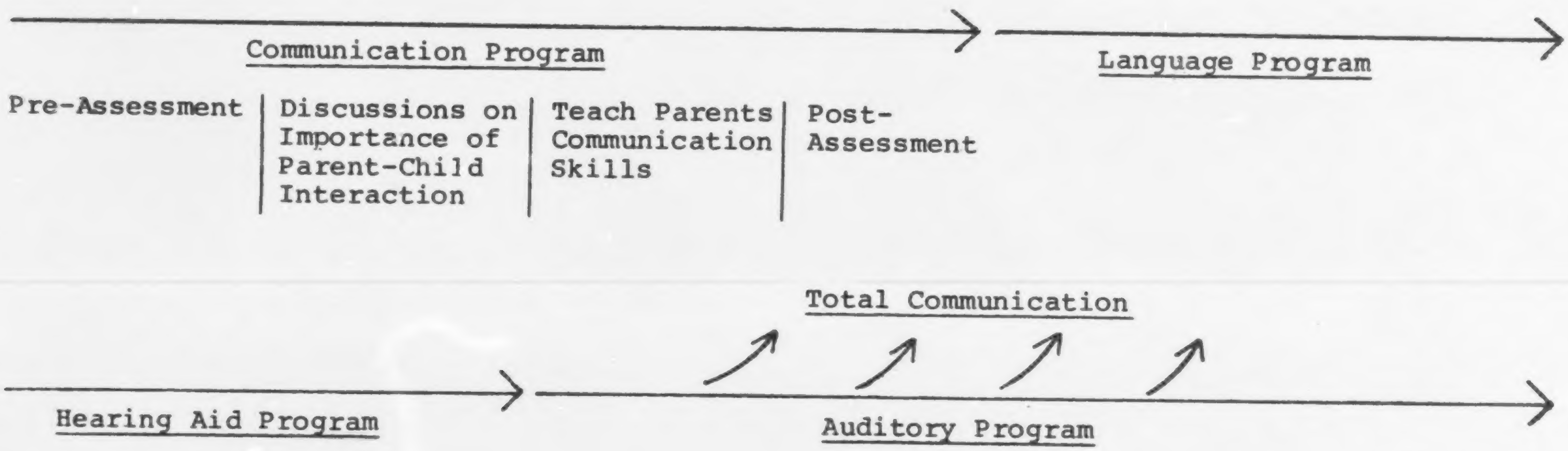
The SKI*HI Model includes a program to assist parents in developing effective interaction with their child. It is the Communication Program. The program begins during the first visits to the home while the home hearing aid lessons are being given. A pre-assessment of the parent-child interaction is made. Parent advisors should set up a 5-10 minute activity (feeding, changing, dressing) and observe the mother's verval and non-verbal responses to the child's expressed intentions. The parent advisor should check the mother's verbal and non-verbal responses on the communication checklists (pp 275-6) These checklists are general indications of what the mother is doing verbally and non-verbally when she communicates with her child. In addition to this general information, the parent advisor needs specific information about (1) how the child reacts to the mother's verbal and non-verbal communication and (2) what type of expressions of intention from the child prompt a reaction from the mother. Take, for example, a child who never responds to mother. As the parent advisor looks at the mother's communication, she determines that the mother is "talking to" the child but rarely looking at the child or the mother is seldom using facial expressions or gestures. Because of this, the communication process is impeded. Or take the child who displays some gestures (to indicate needs) that the mother considers inappropriate. She does not respond to the child's gestures or punish them. Here again communication is being destroyed instead of facilitated.

The parent advisor can use the interaction analysis forms on pages 277-8 determine specific child reactions to the mother and the mother's reactions to the child. The parent advisor should arrange for the mother to do some natural activities in the home while checking the interaction forms. It is suggested that the parent advisor concentrate for 5-10 minutes on the mother's reaction to the child while recording on interaction form "A" and then concentrate for another 5-10 minutes on the child's reactions to the mother. This information can be recorded on form "B".

After this information has been obtained and while the remainder of the home hearing aid lessons are being given, parent advisors should present 5-10 minute discussions on the importance of mother-child interaction.

After the home hearing aid program is completed and the auditory program is begun, the parent advisor should begin teaching the parents the communication skills. The checklist and interaction analysis information that the parent advisor has already obtained should be used as a guide in determining which communication skills need particular emphasis. For example, if a parent is not imitating and expanding the child's babbling(verbal) or looking at the child during communication (non-verbal), the parent should be given special help with these skills. It is advisable for the parent advisor to discuss all of the communication skills with the parents, spending extra time on skills requiring special help.

COMMUNICATION PROGRAM IN THE SKI*HI MODEL


Communication Program
Language Program
Pre-Assessment
Discussions on Importance of Parent-Child Interaction
Teach Parents Communication Skills
Post-Assessment
Total Communication
Hearing Aid Program
Auditory Program

COMMUNICATION SKILLS

I. Establish An Effective Communication Environment

A. Keep background noises at a minimum when communicating with your child, It is very difficult for the child to hear you if radios, TV's, or other appliances are on. Make conscious attempts to reduce background noises when communicating with your child.

Teaching suggestions:

1. Show slide presentation "Sound Approach" to the parents and discuss it with them.
2. Have parents note competing noises during busy hours (suppertime, when older children arrive home from school, etc.). Have parents work to reduce noises on subsequent days.

B. Allow your child freedom to explore and play rather than always keeping your child confined to a playpen or infant seat. Your child must have the chance to explore objects and learn what they are for if he is to understand what the labels mean. Childproof and safetyproof your home. Leave safe, interesting items in places accessible to your child for easy exploration. Old magazines, plastic containers, bottle caps, etc. on low cabinets are fun for the child. Provide safe objects for your child to climb in or onto.

Teaching suggestions:

1. Discuss with parents the pamphlets "A Home Arranged for Learning", "Learning Through Involvement at Home".
   These are available from- Utah State University Extension
   Utah State University
   Logan, Utah 84322
2. Assist parents to "child proof" the home environment.

C. Place your child near you for his play and exploration while you go about your business. You should be close enough that you can stop your work to explain and describe things to your child. You can also occasionally call things out to your child. As your child moves from one item of interest to another, your communication should be spontaneous and appropriate to the situation. You are acting as a communication consultant. If you are at times too busy to respond to the child, that is O.K. - that's an important lesson for your child to learn, too.

Teaching suggestions:

1. Discuss an article entitled "A Warning To Conscientious Mothers," by Martin Cohen that appeared in Today's Health, February, 1974.

The article is summarized here:

A study was done at Harvard University to determine what makes mothers of socially and educationally successful children different from mothers of unsuccessful children. Four hundred families were included in the study. Children were rated on social behaviors and educational skills (which included language abilities). On the basis of this, the children were categorized as A B or C. "A" children were very competent; "C" children were those who scored lowest on various educational and social parameters.

A team of researchers then went into the homes of the mothers of the A and C children. The B mothers were excluded so the contrast in the A and C mothers would be more obvious. The homes were visited one day a week for six months. The researchers found that marital status, income, education or family size did not make the difference between "A" and "C" mothers. However, the researcher did note some important differences in "A" and "C" mothers.

1. "A" mothers enjoyed relating to their children. The children were allowed to explore their environments (pull things out, etc.) while the mothers were close by explaining things to the child. Often the mother would pause in her work, go to the child, and talk about what the child was doing. Children were often seen following their mothers about, casually communicating about objects and events in the home.

2. Mothers of "A" children were not worried by the children when they began to assert themselves and say "no". Mother would re-

direct the attention of the child or comply with the "no".

3. Mothers of "C" children were worried about clutter. Their homes were very neat and clean. Children were kept at distances in playpens and infant seats. The children were exposed to a lot of T.V., since the mothers thought this would provide good language stimulation. Mothers spent a few minutes each day "teaching" the children specific skills. However they did not engage in a lot of spontaneous, on-going communication with the children.

4. "C" mothers worried about the children becoming brattish when they began to say "no". Mothers snuffed out the "no" behavior with discipline.

II. Establishing Contact With The Child

A. When talking to your child, get down on your child's level, as close to him as possible. Speech is most intelligible for the hearing impaired child when the speaker is within 3-4 feet from the child. At times, provide ad concham stimulation for the child (talking directly into the child's ear). This is particularly effective when the child's aids are off such as bathtime. Sing, babble, coo into your child's ear.

Teaching suggestions:

1. Discuss the concepts of correct conversational distance and ad concham stimulation with the parents.
2. Parent advisor should model these skills to the parents.

B. Maintain eye contact and direct your conversation to the child. Focus totally on your child while communicating with him. Disregard other environmental factors. If you are looking at your baby and directing your conversation to him, he will respond. If you look at your child but do not direct the conversation to him(talk to another person), he will not respond. If you do not look at him, but direct the conversation to him, it is also unlikely that he will respond. In a study done at the Lexington School (Conners, 1976), mothers of linguistically superior children were found to look at their children more while vocalizing directly to them than mothers who did not. It is important for you to look at your child while directing your conversation to him.

Teaching suggestions:

1. Parent advisor should discuss these two important ideas with the parents. The parent advisor should demonstrate to the parents what happens when she directs her conversation to the child but does not look at the child and what happens when she looks at the child but does not direct the conversation to him.

Note: If the child does not look at the parent's face, the parent advisor may need to help the parent do some specific things to teach the child this skill. The parents must be able to request attention from the child in order to teach him new skills efficiently. The following procedure may be used by the parents to obtain attention from the child. At meal time or snacks, place the child in a tray chair or infant seat. Have small pieces or a dish of a well-liked food ready. Sit close with your face about ten inches from child's face. If child already looks at food, raise spoon or piece of food to just below your eyes as you call his name. When child's gaze approaches your eyes, say "Good!", and immediately place food in his mouth. Require progressively closer approximation to eye contact before giving food. When child is consistently looking, begin to fade out the prompts given. If hand is used to turn child's face to yours, lessen the pressure used, and remove pressure just before completing the head alignment. Later use hand only to start him. If a food prompt is used, lower the spoon or piece of food to your mouth level, then below chin and then chest high, still requiring eye contact before giving food. When child reliably makes the response with few or no prompts, begin requiring longer looks before reinforcing. Talk to him for several seconds while he is looking before giving food. Be careful never to place food in child's mouth as he turns away, even if he has looked. He must be looking at you when receiving food. (Griffin and Sanford, 1975 p. 27, 39)

III. Communicating Effectively with the Child

A. Non-verbal communication skills

1. Use interesting, varied facial expressions in your communication. Your child understands 55% of what you say by relying on your facial expressions and other non-verbal clues (Mehrabian, 1968). Let your face tell the child that what you are saying is interesting and fun. Let your face show such feelings as surprise, delight, disgust, confusion, discouragement. While your child is vocalizing, let him see by your facial expression that you are interested in his communication. Remember to smile at your baby while talking to him. (It is surprising how many parents unintentionally forget to do this!)

2. When communicating with your child, use varied intonation and rhythm patterns. Your voice must indicate that what is being said is interesting. Let your voice move up and down, get loud and soft, emphasize certain words. Children "turn off" readily to a deadpan voice. Put meaning and interest into what you say.

A study was done at the University of Texas (Blount, Padgug, 1976) to determine which of about 35 features of parental speech which was used most frequently in communication with very young children. It was found that exaggerated intonation was the most frequently used feature. There is a reason why parents use exaggerated intonation in their communication with infants. Snow (1976) maintains that parents use exaggerated intonation contours because they ellicit greater attention in babies. Parents need to know that their use of intonation with the hearing impaired infant will help the baby attend to and maintain interest in what the parent is saying.

3. Use natural gestures when you talk. Many of a child's first words are those accompanied with gestures such as "I don't know", "bye-bye", "come here", etc. Encourage your child's use of natural gestures.

4. Touch your baby in a stimulating way while you vocalize to him. Pat your baby's hands together, blow on your child, touch the baby's hands to your face, pat or stroke your child, kiss your child, squeeze him gently.

Teaching suggestions:

1. Parent advisor should discuss these important skills with the parents. The parent advisor should also demonstrate each skill to the parents.

2. The parent advisor should arrange for the parent to perform a natural activity with the child. While the parent is doing the activity, the parent advisor should use the "Non-verbal Communication Checklist" on page ______ to determine if the parent is using effective non-verbal communication. Each time the mother says something, the parent advisor should check the non-verbal communication skills the mother uses. It is helpful for many parents to view themselves on videotape to determine the extent to which they use non-verbal communication. Many previously "dead-pan" mothers have livened up considerably after viewing themselves on video tape. For parents willing to be taped, video taping and viewing should be arranged.

B. Verbal Communication Skills

1. Respond to your baby's cry. Indicate to the baby that his cry is a communicative act. This can be done by:

   a. Showing concern for your baby's cries (facial expressions such as a worried look, tensing the body, vocalizations such as "Oh! you must be wet").

   b. Speaking reassuringly to your baby for comfort when he cries (talking, rocking, cooing, humming, making eye contact) instead of shoving in a pacifier or bouncing your baby to quiet him.

c. Showing relaxation when your baby stops crying (relaxing body, smiling, gently vocalizing such as "You feel better now")

Teaching suggestions:

1. Parent advisor presents the concepts and models then for the parents.

2. Stimulating Your Child's Babbling

a. Imitate and expand your child's babbling and vocal play. If your child says, "baba", you may want to say "Baba - yes that's your bottle".

b. Imitate and expand your child's motions and add vocalizations to go along with the motions. For example, if your child is bouncing his legs, you bounce your legs while using such sounds as la-la-la.

c. Initiate babbling for your child to hear. Introduce a new sound or two each week. The Language Development Scale on page 297 indicates at what age a child is capable of producing specific babbling sounds. The scale can be used as a guide in deciding what order the babbling sounds should be presented to the baby. McCarthy (as cited by Vorce, 1978) indicates that a child cannot use a sound in his spontaneous language that he has not previously babbled. Reinforce your child when he imitates your babbling, but never insist on him babbling. Your child may not imitate your babbling until he has had many weeks of listening. Remember to use interesting facial expressions, intonation patterns, and motions while babbling.

Note: If the child cannot imitate sounds, he may need special help with imitations of gross motor skills before he learns to imitate vocal sounds. The child can be taught to imitate simple motor skills by doing the following: When child is looking at you, say "Do this" and perform simple movement (one that the child has been seen to make) such as clapping hands. Immediately after demonstration, physically guide child through same movement and then reinforce (use praise and food). Continue to model the same movement while gradually reducing the help given on the child's response. (Reinforce after each response, regardless of the help given.) In physically guiding him through the movement, remove your hands just before completion of the response. Use less hand pressure as he cooperates in the movement. Later remove your hands after starting him on the response. Continue to reduce prompts until child performs with no help. At this point present a different response (again, one the child can already make), and resume physical prompting if necessary (it will be in early sessions). Fade out the prompt as quickly as possible, and continue to reinforce after each response. When this imitation occurs without prompting, intersperse it with the first learned one, and begin to train another new one. Continue to model and train different responses in this way until child will perform an approximation to any simple movement demonstrated when requested to do so. After imitation of gross movements has been accomplished, work on finer movements, mouth movements, and vocalization.

Begin to present two movements in sequence, such as sitting down, then clapping hands. Lengthen the chain of behavior that must occur before reinforcer is given. (Griffin and Sanford, 1975 p. 43)

Teaching suggestions:

1. Parent advisor discusses and demonstrates these skills.

3. Talking To Your Child

   a. Talk about obvious things that are happening to your child. Talk about the meaningful, emotional experiences that are happening to him. Talk about the here and now rather than what has happened or will happen. Studies indicate that children's first words are words which express whole thoughts, which are concerned with meaningful daily activities, and which are tinged with emotion. Children do not necessarily use words which are easy to say (visibility of sounds or ease with which sounds are made). Rather, they use words which express their emotions and fulfill their needs. There is a lot of motivation for a child to say "milk" (I want milk) or "broke" (when the dish falls and breaks) because he is vitally emotionally interested in these subjects. Even if children are given repeated exposures to non-functional, non-meaningful words in tutoring session, their first words will still be words such as "fall", "up", and "dirty" that are concerned with their emotional experiences. As a parent, you need to observe your child's desires, interests, emotional states and communicate about them.

b. Talk about Fun Things that Interest Your Child.

Take advantage of the child's natural curiousity. Bugs, small animals fascinate children. Add elements of suspense and surprise to your communication. "Oh, no! Where is your sock?" (look. [illegible]ok) "Oh, here is your sock in my pocket."

c. Take advantage of your child's communicative clues by responding with simple language. Children are constantly giving their parents clues as to what they want, what they see, how they feel. For example, a child points to his bottle and the mother knows he wants his bottle. Often parents react to a clue by simply giving the child what he want without saying anything to the child. For example, the child throws his cracker away, mother picks it up; the child points to water, mother gives him a drink of water. It is important that you take advantage of your child's clues and respond with simple language. Your responses to your child's clues should be warm and encouraging. Studies done by Greenstein indicate that the more critical, coercive utterances that are used by the mother, the lower the rate of l[illegible]uag acquisition in the child. Of course, using inhibiting, punitive utterances is sometimes appropriate. But the large majority of your responses to your child's clues should be warm and accepting.

Examples:

Child's Communicative Intents	Parent Responses
A. Pointing (what is the child pointing at?)	Do you see a dog? I hear the dog go "arf, arf, arf,." That is a big dog.
B. Trying to open or close a door (Is he trying to open the refrigerator? Is he trying to open a closet door?)	Open. Open the door. Here is your coat. Let's put on your coat. Oh-h, what a warm coat.
C. Tugging (perhaps at mother's leg or dress)	You want me to come. Say, "Come, Mommy, come."
D. Stretching his arm up.	You want to come up. Up, up, up you come.
E. Looking (Child is looking at mother)	I see you. Hi, sweetheart. I love you.
F. Standing by an object (where he is standing-by the fridge, the dinner table, the toilet, the window? Does he need to go to the bathroom? What does he see or want?)	Do you see some children? Yes. I see some children. Say, "hi". Tommy is hungry. Mumm, smell the good food. Come sit on your chair. Up, up up. Now you can eat some food.
G. Child is vocalizing to make a want known (what does the child want?)	You want a cracker. Here is a big cracker; a big, big cracker.
H. Child is quietly playing and vocalizing	Mother calls to child, "Stevie, Stevie, I see you. I love you."

Teaching suggestions:

1. Parent advisors should discuss this principle with the parents.
2. Parent advisor should model to the parents during a 10-15 time period how to provide simple responses to all of the

child's communication intents. Parents should then do this for 10-15 minutes while the parent advisor observes and monitors the parent's performance. The parent adivsor should tell the parents that at subsequent lessons, she will chart opportunities (child expressed intentions) vs. utilizations (parent responses to the child's expressed intents.) This will be done during 10-15 minute intervals and will be unannounced. If the number of opportunities is the same or almost the same as the utilizations, the parents will be taking advantage of the child's communication intents. If not, the parent advisor will remind the parents to respond when the child expresses an intent until the parents do it as a matter of habit. Periodic charting of opportunities vs.utilizations will reveal to the parent advisor when the parents are responding to all or almost all of the child's communication intents. All chartings will be discussed with the parents.

d. Everything has a name -- use it. Avoid pointing. Avoid excessive use of pronouns.

e. Use short, simple sentences rather than long, complicated sentences.

Examples:

Right: What a pretty dress!
What a pretty girl!

Wrong: Your pretty Sunday dress makes you look like such a pretty girl!

f. Give your child a chance to show that he understands what you are saying. Give him time to respond to you. Be a listener as well as a talker.

g. Reinforce your child when he responds. Reinforce him for using his voice. Reward him whenever he attempts to say a word.

Note: Parents should be aware of reinforcing the child's linguistic attempts and doing so at this point. However, a detailed presentation on reinforcement is presented to the parents in the language program.

Teaching techniques for all verbal communication skills:

1. Parent advisor should discuss and demonstrate these skills to the parents.

2. Parent advisors should use the "Verbal Communication Checklist" to determine if the parents are incorporating the above verbal concepts in their communication. Skills that are not being done by the parent should be reviewed by the parent advisor until the parent can perform them with ease.

Sources

1. Learning Accomplishment Profile For Infants - P. M. Griffin and A. R. Sanford, 1975. Chapel Hill Training - Outreach Project (Funded by BEH, U.S. Dept. of HEW) Kaplan Press - Winston Salem, North Carolina.

2. Methods of Fostering Language In Deaf Infants - J. M. Greenstein, June 1975. Final Report to HEW, Grant #OE 6-0-77-539.

3. New Directions In Infant Programs For The Deaf - Leo E. Conner. In Volta Review, January, 1976, p. 8-15.

4. Prosodic, Paralinguistic and Interactional Featuers in Parent - Child Speech: English and Spanish - B. G. Blount and E. J. Padgug in Journal of Child Language, 1976, 4:67 - 86.

5. Speech In The Preschool For The Deaf - Eleanor Vorce, in Readings in Deaf Education, 1978 - Special Learning Corporation, Guilford, Connecticut p. 74-76.

6. The Development of Conversation Between Mothers and Babies - C. E. Snow in Journal of Child Language, 1976 4:1-22.

Non-Verbal Communication Checklist

Parent expression	close to child	looking at child*	facial expression	intonation	gestures	touch w/ vocalizing
1.						
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						
11.						
12.						
13.						

*Parent advisors should remind parents that when they are providing ad concham stimulation or teaching a specific auditory skill, looking directly at the child may not be necessary.

Verbal Communication Checklist

☐ 1. Respond to baby's cries with reassuring vocalizations (talk, coo, hum), instead of pacifier or bouncing

☐ 2. Imitate and expand child's babbling

☐ 3. Imitate child's motions and add vocalizations

☐ 4. Initiate new babbling for the child to hear

☐ 5. Talk about the meaningful daily activities of the child (the obvious, "here and now" activities)

☐ 6. Talk about fun things that interest the child (take advantage of the child's natural curiosity)

☐ 7. Take advantage of the child's communicative intents (pointing, looking, tugging, vocalizing, etc.)

☐ 8. Use names of things. Avoid excessive pointing and use of pronouns

☐ 9. Use short, simple sentences

☐ 10. Give your child a chance to show that he understands what you say

☐ 11. Reinforce your child when he responds

Interaction Analysis

Form A

Child's Expressed Intentions | **Parent Reaction**

Response:	gestures	vocalizations	facial expressions	behaviors	no response	looks at or moves toward child	vocalizes	intonation	facial expressio	gestures	touche chil
1.											
2.											
3.											
4.											
5.											
6.											
7.											
8.											
9.											
10.											
11.											
12.											
13.											
14.											
15.											
16.											
17.											
18.											
19.											
20.											
21.											
22.											

Interaction Analysis

Form B

Parent Communication

	Looks at child	close to child	vocalizes	intonation	facial expressions	gestures	touch
1.							
2.							
3.							
4.							
5.							
6.							
7.							
8.							
9.							
10.							
11.							
12.							
13.							
14.							
15.							
16.							
17.							
18.							
19.							
20.							
21.							
22.							
23.							

Child Response

no response	gestures	vocalizations	facial expressions	behaviors

HOME LANGUAGE PROGRAM

When there is evidence that the child is developing definite communicative skills, the language program is formally introduced and the emphasis is now on language development. Now that the child is communicating he can profit by the language program.

The language program basically teaches the parents to use parent dialogue, increased vocabulary frequency, reinforcement for the child's use of language, naturalness, and the use of language expansion in four language settings in the home environment. The parent advisor explains the four language areas to the parents, then models for them how to use the above language principles in the areas.

PARENT DIALOGUE

Discussion:

There are several philosophical and practical approaches to dealing with language input for language delayed or disordered children. One will hear the terms parallel talk, self talk, parent dialogue, talking for the child, talking to the child, language modeling and expansion of language.

For this discussion we will deal with only two terms--parent dialogue and expansion.

Parent Dialogue:

The parent constantly talks about the child, what the child is doing and about the child's environment. Whenever the parent and child are together the parent should talk about the child, the child's actions and the things around them. The parent should do this in a natural way using the simplest sentence patterns possible. The parent dialogue should be in complete grammatically correct, simple sentences.

Examples

What the child is doing

Child eats a banana - Parent, "Oh! you are eating a banana." "You ate the banana!"
Child runs to the kitchen - "Bobby ran to the kitchen."

About the child

"Bobby has a new shirt." - "Bobby is a big boy."

About the child's feelings

When the child is obviously happy - "I am happy or Bobby is happy."

About the environment

"It is raining today." "The sun is warm." "We smell the good food."

Application:

There is a short discussion in the auditory program on parent dialogue. During the auditory program the parent will begin to use parent dialogue but it will not be given emphasis.

Parent dialogue will be the first step in the language program. The parent advisor should have a lesson on parent dialogue. Describe the term, explain the concept and give examples. Explain why it is imperative that the parent talk to the child. The parent advisor should then tell the parent she will conduct an activity emphasizing parent dialogue. Ask the parent to make a tape recording of the activity. The parent advisor should then conduct the activity using dialogue _all_ the time. At the conclusion of the activity, sit down with the parent and discuss the activity and listen to the tape and discuss the what and how of the parent advisor's dialogue. _Note_ that there are no long silent times on the tape recording.

The parent advisor should leave a challenge for the parent to use dialogue. Have her tape one short session during the week. The parent advisor should have dialogue activities and sessions with the parent until there are few or no long silent times when the child and parent are together.

When the parent is dialoging all the time she is ready to use this dialogue in the four areas of language in the home. The next task of the parent advisor is to work on these with the parent.

FOUR LANGUAGE AREAS

There are activities in the home which are natural language learning situations. We have identified four of these and called them the four language areas. We believe that most language learning takes place in these areas. We have isolated them and help the parents to use each area as a maximum language learning situation. The four areas are:

A. Child Care Activities
B. Parent Task Oriented Activities
C. Child Oriented Activities
D. Parent Directed Activities

Child care activities are activities the parents must do to take care of the child. Such things as dressing, undressing, feeding, and bathing are child care activities. These child care activities are probably the most language rich activities a child can participate in. This is the time when parents and child must communicate. The feeding, changing and bathing time is a vital time to the child's total development. The mother, father and older siblings should learn to use these seven language principles in child care activities:

(1) non-verbal clues
(2) auditory language skills
(3) maximum use of parent dialogue
(4) increased frequency in use of vocabulary
(5) reinforcement for language usage
(6) naturalness
(7) expand the language used by the child

Parent task oriented activities. These are the tasks that mom and dad must do everyday. The child participates in these activities. Such activities as doing the laundry, making the beds, yard work, and cooking are parent task oriented. Parents have to do these regularly. The child will often want to participate in these activities. The parents should not feel that the parent advisor is trying to teach them or their child these tasks but showing and helping them to use these activities as maximum language learning situations. The child should not be forced into these situations but the parent should be able to make them meaningful language situations when the child wants to participate. As in the child care activities, the family should learn to use the same seven (7) language principles.

Child initiated activities. Often a child will be playing by himself in an activity he initiated himself. The child is obviously motivated and interested. These activities can be an excellent language learning experience for the child. The parent advisor should model for the parent how she can, when she sees the child in an activity, intervene with the child and make it a linguistically meaningful language experience. The parent should learn to use the seven language principles as stated in the child care activities. The parent advisor should try to include one of these activities in each visit.

Parent directed games, stories and activities. Some language skills can best be developed through semi-structured games, activities and through reading stories. The parent should learn to sit down and read a story to their hearing impaired child or get up a language game or creative activity such as coloring, cutting, etc. The parent advisor can occasionally bring games, activities, and materials into the home to demonstrate these to the parents. The parents should learn to use their own activities with the seven language principles given in the child care activities.

Selection of Target Vocabulary and Phrases:

The hearing impaired child must "hear" vocabulary as often as children with normal hearing if he is to develop vocabulary. The hearing impaired child will not hear the words as often as normal hearing children under normal circumstances. This is why the word must be spoken many more times than normal for him to hear the normal amount of times. Parents can and should increase their total verbal productivity. They should talk more. They should talk to the child as much as possible at all times. It is also necessary to choose specific vocabulary and phrases in which the frequency will be deliberately increased.

Directions for Use by Parent Advisor:

1. After the parent has done at least one activity in each of the four language areas, the parent advisor should have a session on selection of target vocabulary and phrases. Discuss the following with the parents:

a. The target vocabulary should be meaningful and be used by the entire family. Do not take words from a list. Use only words used in the home.

b. Target vocabulary should be used in a natural "grammatically" correct sentence. That is, as correct as a family normally talks. The family should not change to one or two word sentences.

c. Most of the target vocabulary selected in the beginning of the program will be THINGS and PEOPLE (nouns), strong verbs (come, stop, eat, etc.) and a few adjectives (big, little, pretty, dirty) plus a very few prepositions (up, down).

d. With the child on total communication, the selection of target words will be a matter of selecting words from the total communication lesson.

e. A parent should choose no more than five or six words per activity.

2. The parent and parent advisor should then select target vocabulary for one language area. The parent or parent advisor can then have the activity using the target vocabulary. Note: Do not talk about frequency yet. The parent is now learning to choose target vocabulary, not frequency. Assign the parent to use these words during the week.

3. On the next visit, review the material on choosing target vocabulary. Have the parent choose target words for another language area (not the same as last week). If appropriate, she should use one or two words chosen for the first area. Discuss the words she chose. The parent or parent advisor (as appropriate) should then do the activity using the target words. Assign the parents to use these words during the week.

4. The parent advisor should repeat the above procedure until the parent has chosen target vocabulary in each of the four language areas. At that time, the parent would be using between 10-20 total target vocabulary in all four areas.

5. When the parent has chosen target vocabulary in each of the four areas, you are now ready to move to frequency of input in language.

Frequency of Input in Language:

The development of vocabulary and thus the development of language is directly related to meaningful verbal experiences with the vocabulary. A person doesn't develop vocabulary understanding and usage with words he does not have meaningful experiences with. Vocabulary development is dependent on the frequency with which a child hears the words and the meaningfulness of the situation it is used in. Meaningful verbal experiences determine when and what vocabulary we learn. The words a child hears most are the words he develops first. The more infrequent he hears the words, the later in life he will develop the vocabulary. If he does not have meaningful verbal experiences with the word, he will never develop meaning for that word.

The hard of hearing child hears the word less often and thus is "delayed" in language development. Even though delayed, if he "hears" the word often enough he will develop the word. He may be a few months to several years delayed. He will develop in delayed fashion most of the common words that six-eight year old children use. However, he will probably never hear the words that are developed beyond eight years with enough frequency to ever develop them.

The deaf child will not develop vocabulary under "normal circumstances." He will not "hear" or understand any words, therefore, he will develop no verbal vocabulary naturally. He will pick up some non-linquistic, non-verbal gestural usages, but not verbal vocabulary.

One of the most important tasks of the home language program is to increase the frequency of output of vocabulary (language) in the home so that the hearing impaired child gets as many meaningful experiences as the normal hearing child.

If the hearing impaired child is only hearing or having verbally meaningful experiences with a word one out of four times it is spoken, we need to increase the verbal output by 400% and then he will hear it as much as the normal hearing child. Of course in the case of total communication, this applies to meaningful auditory-visual experiences. The parents must learn to use target words and target phrases with as much increased frequency as possible for those parents.

Application:

1. On one visit have a special lesson with the parent on frequency. Explain why it is necessary to increase verbal input. Use the above material.

2. Select five target vocabulary for one area.

3. Demonstrate to the parents how the frequency can be increased.

   a. Use a normal or below normal frequency usage of the target vocabulary. Have the parent count the number of times you use the vocabulary.

   b. Increase the frequency by at least 200 to 400%. (Use the word 6 to 8 times every five minutes instead of twice.)

   c. Using the guidelines for selection of target vocabulary and target phrases, have the parent conduct an activity in regular frequency. Make a count. Then set a goal to increase this frequency. Do this until you arrive at the optimal frequency level for those parents. Some parents just talk more than others so the frequency rate will vary from family to family and within families.

Expansion:

The parent should use parent dialogue until the child starts to make expressive utterances. When the child makes an expressive utterance the parent will continue with parent dialogue and should expand that one word or sign to a complete, simple sentence. At first the parent should do this everytime the child makes a verbal utterance. As the child becomes more verbal, the parent can't expand the utterance every time, but should do it as much as possible.

Expansion is for the parent to expand the child's utterance into a complete sentence or from a complete sentence to more complex patterns.

Examples of expansion from one, two or three word utterance to simple sentence:

Child's Utterance	Parent's Response
Ball	You have the ball or The ball is red (etc.)
Daddy home	Daddy is home
Ball up	Throw the ball up
See doggie	You see the doggie

Expansion of Vocabulary:

Child's Utterance	Parent's Response
I see	You see the bird
I go town	You went to town

Sentences with different tenses:

Child's Utterance	Parent's Response
We went to town many times	You have gone to town many times
I see the bird	You saw the bird

Sentences with prepositional phrases of time, place, etc.

Child's Utterance	Parent's Response
We went to grandmothers	Last week we went to grandmother's.
I put the ball	I put the ball on the table

Compound sentences:

Child's Utterance	Parent's Response
We went to town	We went to town and we bought some candy.

It is imperative that the parent understands that they should not require the child to say back the expanded expression. The parent should give the expansion, but not expect the child to give the expansion back. If the child does give back the expansion, of course reinforce him.

Application:

1. Have a special home visit session on expansion of the child's language. Explain to parents. Give examples.
2. Demonstrate to parents working with the child in an activity.
3. Have parents expand language when child uses utterances.
4. Whenever there is an opportunity for expansion that the parent doesn't take advantage of, call attention to it.
5. Reinforce the parent for expanding child's language.

Naturalness:

Webster defines naturalness as being free from pretension. Natural at once implies freedom from artificiality or constraint.

This definition applies in teaching language to hearing impaired youngsters. True language cannot be taught by rote. To be real, language must have meaning. There must be reasons for using it.

Parents need to talk to their hearing impaired child just as naturally as they talk to their hearing children. They need to feel comfortable in doing so. If language is going to be developed by the hearing impaired child, he must feel he is part of the family. Parents of language disordered children may become unnatural. They may speak too loud. They may exaggerate movements. They may use "fixed" unnatural sentences.

Application:

Most parents will be natural with their deaf child. For those who are, just reinforce what they are doing. However, if parents are using unnatural language you can discuss this with them, or video tape a session and view it with the parents. You may need to give specific examples of unnaturalness and model naturalness for them.

BEING RESPONSIVE TO LANGUAGE IN THE HOME

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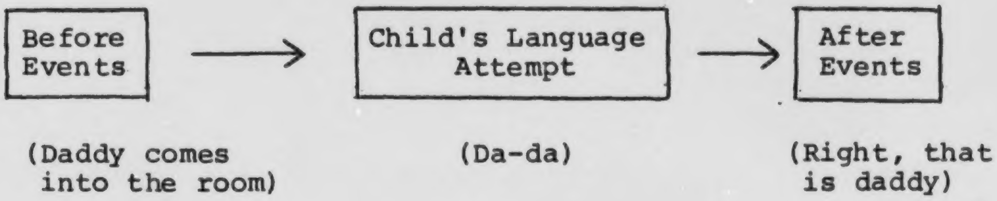
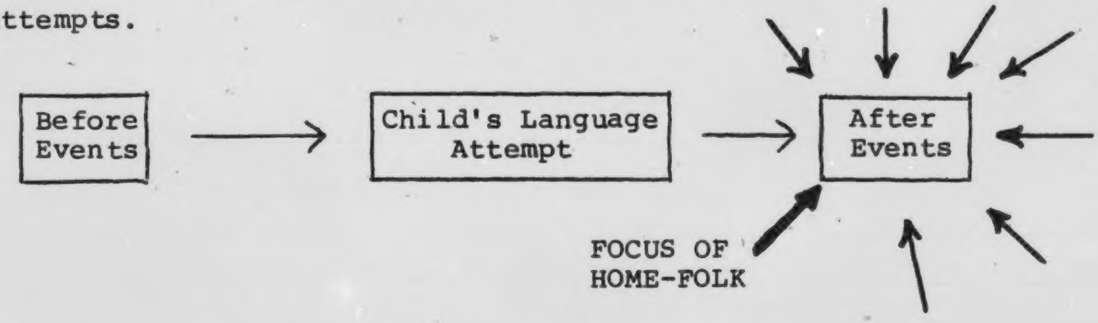
Language acquisition is a complex problem which includes many factors. One of the important factors if the frequency of language behavior which the child attempts. The home situation should maximize the number of these language attempts so that the child finds success and positive results from his attempts at language behavior. There are some very easy and practical ways for parents and others in the home to insure that the child will gain these positive outcomes from his/her language attempts. The general principle is that the child's language attempts will increase if those attempts are followed by positive results in the home. This presentation will attempt to give some guidelines to parents and others on how to facilitate such language attempts by using after events.

The Structure for Proper Response

How parents and others in the child's environment respond to the child's language attempts determines the frequency of the child's language attempts. The study of language development has shown that the things or events which immediately follow these attempts at language, control how frequently the attempts occur in the future. These events which follow a child's language attempts may be called AFTER EVENTS. Additionally, it has been shown that the things which come prior to a child's language attempt may help the child or encourage him to make an attempt at language (for example, pointing to an object and asking a question or showing the child a picture and asking a question about the picture). These events may be called BEFORE EVENTS since they occur before the child's language attempt. Together these events make up a chronological sequence which looks like this:

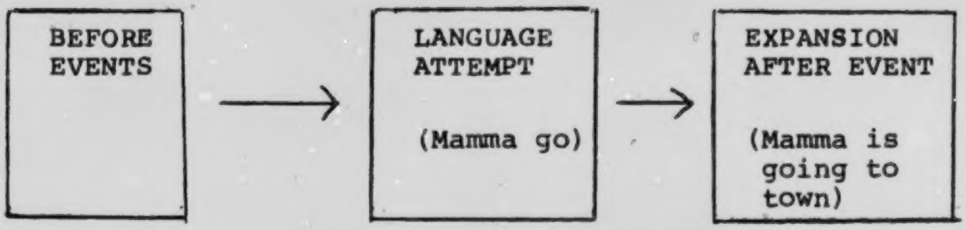

Before Events
Child's Language Attempt
After Events
(Daddy comes into the room)
(Da-da)
(Right, that is daddy)

All language behavior may be looked at and analyzed by this simple three step process. Sometimes the child simply begins verbalizing without any observable before events and many times no observable after event occurs in response to the child's language attempt. The important factor for parents and others in the home environment is to work towards maximizing the occurrence of positive after events after as many child language attempts as possible during the time the child is making such attempts. Maximizing these after events will increase the frequency of the child's language attempts and will maintain the child's "motivation" to continue attempting language. Hence, the focus of those in the home should be in assuring that positive after events occur following the child's language attempts.


Before Events
Child's Language Attempt
After Events
FOCUS OF HOME-FOLK

Positive After Events

Positive after events may be given in many different ways. Some recent research indicates that the total impact of communication is made up of 7% verbal (i.e., the words we say), 38% vocal (i.e., tone intonation - the way we say it), and 55% facial-visual (i.e., the expressions - gestures, etc. - how we say it). If this is true, then which words we use isn't nearly as important as the tone of voice we use and our facial-gestural enthusiasm in responding to children's language attempts. Simple attention from a parent in the form of looks, smiles, assorted vocal sounds and verbal praise is a powerful after event to a child which gives him/her a feeling of achievement, success, etc. in his/her language attempt. Other types of after events are also important to the task of assisting language growth in the child. One of these types is what language teachers call "expansions." Expansions are very useful and functional for use in the home environment as after events which can also result in auditory stimulation to the child. Expansions are after events which repeat the child's language attempt or "expand" them into grammatically longer and correct language units. An example would be where a child says, "Daddy go" and immediately Mommy says, "Daddy is going to work," an expanded version of the child's initial utterance. Expansions are functional because they not only communicate attention, but also because if used properly, i.e., with enthusiasm and excitement, communicate positive acceptance and hence increase the probability of the child making another language attempt. Expansions are perhaps the best after events which can be used to accelerate and increase language in children. If used properly, they fit into the structure as follows:



Other types of after events include words of praise, facial expressions, nearness, and physical contacts of various sorts. Below is a short listing of potential after events which can be used to increase children's language attempts. It will be apparent that the type of after event used will depend on the age of the child, his current level of language, and what the parent or person delivering the after event is doing.

Possible Praising Words and Phrases

Good
Groovy
Excellent
Good thinking
I love you

Thank you
That's right
I'm pleased with that
Great
That's interesting

That's clever
Exactly
I like that
Good job

That shows a great deal of work
You really pay attention
You should show this to your father
Show grandma your picture
Go say that to Daddy

Expressions:

Smiling
Winking
Nodding up and down

Looking interested
Laughing
Clapping

Nearness and Physical Contact:

- Touching
- Hugging
- Sitting in lap
- Patting head, shoulder, or back
- Stroking arm
- Shaking hand
- Holding hand
- Moving close and listening

Effective usage of after events does not require a great deal of time or preparation from the parent. Most of the after events suggested above may be given without interrupting the normal flow of work or home tasks which are going on. The important principle to remember is immediate responsiveness to the child's attempts--and to place most emphasis on the vocal (the way you say it) characteristics and the visual-facial (how you say it--enthusiasm, etc.) characteristics of the after event rather than worrying about exactly what you say. Only in the use of expansions do you need to hink about what to say--and then only to generate the longer form of the message which the child was attempting to communicate. Immediate response to the child's language attempts will provide the child with motivation to keep trying and to continue making and modifying his language attempts.

Practicing and Remembering to be Responsive

Some parents need help in learning how to be good users of after events. The key is to think about all the situations in which you and the child are proximal (together) and figure out how to apply after events in those situations. Initially try a specific number of times (10) in each situation and then gradually expand. You will find the more you practice the more natural it becomes. One way to help you remember to be responsive is to put reminders in various strategic locations throughout the home where you are frequently together with your child. Put up signs or other items in key places to remind you. Notes stuck on the refrigerator, the kitchen cabinets, the back of the bathroom door, or your dressing table can serve as cues to remind you what you should be doing. The signs you put up may read as follows:

BE RESPONSIVE

Be Enthusiastic

PRAISE Billy

Tell Billy how well he is talking

Remember to EXPAND

Are you listening for Billy?

The continual use of good after events can be very helpful in the complex process of language training. If your child is receiving special individual help, you should contact the teacher for information on what specific language behaviors to look for and to be responsive to. This use of natural life situations and naturally occurring after events makes the transition from the language training situation to the real world much easier and more efficient.

SKI*HI LANGUAGE DEVELOPMENT SCALE

Description

The Ski*Hi Language Developmental Scale lists expressive and receptive language skills that a child of a particular age would normally demonstrate. The scale is a most important assessment tool, particularly for the 0-2 year old hearing impaired child. There are several language assessment tools that require an elicited behavior from the child who has language. For example, some assessments require the child to point to or name an object, to follow a simple command, or imitate a sentence. However, to elicit pre-language behaviors from the child much under two years of age is difficult. The few tests that do look at pre-language skills (motor imitation, functional play, auditory responsiveness) are either not standardized or include many auditory skills (such as turning to sound sources). The predominant inclusion of auditory skills unfairly penalizes many hearing impaired children.

Auditory items are not included in the Ski-Hi Language Developmental Scale. A separate auditory scale is included in this manual under the Auditory Program.

The scale contains language skills for the 0-2 year old child in two month intervals, and the 4-5 year old child in 6 month intervals. There are enough language skills per age interval to facilitate a good profile of the child's language ability.

Children who use total communication are not penalized on this scale as they are on many other scales. Children are given credit for responses to signs as well as vocalizations.

Development of the Scale

The Ski-Hi Language Development Scale was compiled using several developmental scales (see source list, page 327). Many of these developmental scales have been norm referenced and shown to be valid and reliable. Each item on the Ski-Hi Language Developmental Scale has been cross-referenced to show what other developmental scales contain that item. The cross references are on page 321. Items with more references are not necessarily more important than items with fewer references.

Use of the Language Development Scale:

The Language Development Scale should be shown to parents upon their entrance into a parent-infant program (child intake session, family orientation). It should be explained to the parents that the parent advisor will leave the scale with them every three months for a one week period. During that week, the parents will observe the child's language behaviors and note those behaviors on the language scale.

Before leaving the scale with the parents, the parent advisor should observe the child's language behaviors and suggest to the parents which units most closely describe those observed behaviors. In that way, parents will be checking language skills in just a few units rather than checking many units that may be far removed from the child's language abilities.

It should be noted that the scale is organized into units instead of age increments, so parents will not become overly anxious if large language lags are present in the child. The organization by unit instead of age enables the parents to look objectively at language behaviors instead of trying to show that the child is performing at a certain age level.

After the parents have observed the child's behaviors for one week and marked them on the scale, the parent advisor should determine in which unit on the scale the child performed half or more of the receptive language skills and in which unit the child performed half or more of the expressive language skills. The parent advisor then determines the corresponding age levels of the units by looking at the chart at the end of the scale: "Age Intervals for Language Development Units." These language ages should be reported every three months at staffings.

SKI*HI LANGUAGE DEVELOPMENT SCALE

Unit 1

Receptive

____1. quiets when picked up

____2. inspects surroundings

____3. anticipatory excitement (Shows excitement when anticipating feeding, etc.)

____4. responds to social approaches by smiling or vocalizing

Expressive

____1. frequent crying: strong, weak

____2. non-crying noises (grunts, hiccups, throaty sounds, sucking sounds)

____3. vocalizing particularly with open mouth sounds ("e" and "a" predominate)

____4. special cry: hunger, pain, discomfort

____5. happy noises: gurgles chuckles

____6. coos (musical vowel-like sounds such as: (eh/oo/ah/oh/)

Unit 2

____1. watches speaker's face or signer's face and hands

____2. anticipates feeding and lifting by noises and visual stimuli (knows he will be fed or lifted by sights and/or sounds of someone approaching.)

____3. recognizes mother by her noises and appearances

____4. aware of many sights and/or sounds in the environment

____5. aware of strange situations

____6. frightened by angry faces or voices

____7. stops crying when someone communicates to him/her (75% of the time)

____1. sustained coo (o-o-o-o)

____2. produces two different syllables (ah goo) (not true babbling; still sounds coo-like)

____3. attempts a few gutteral sounds (k g ng)

____4. vocalizes to social stimuli (someone lifting, holding, talking to child)

____5. smiles when smiled at

____6. laughs aloud

____7. some control of volume variation (loud, soft)

____8. babbles by repeating series of same sounds (ga, ga, ga)

Unit 3

Receptive

____1. responds to own name when called some of the time by stopping activity

____2. knows when strangers are present

____3. stops crying when someone communicating with him/her

____4. knows the difference between angry and friendly voices (and faces) with appropriate behavior

____5. understands "no-no" accompanied with head movement and facial expression by stopping activity (50% of the time)

Expressive

____1. adds sounds like (p) (b) (m) to babbling

____2. stops babbling when someone vocally interrupts

____3. babbles directly to person

____4. vocalizes feelings (pleasure, displeasure, eagerness, etc.) by vocal patterns other than crying

____5. plays at making sounds (noises) while alone

____6. vocalizes to own image in mirror

____7. blows bubbles

Unit 4

Receptive

____1. recognizes some names of other family members

____2. recognizes words such as "bye-bye" "come" "up" "hi" etc. that are often accompanied with gestures (child usually responds with gestures such as raising arms, nodding, or waving)

____3. begins to associate meaningful actions (gestures) with effects

____4. stops activity when his name is called (signed) 78% of the time

____5. recognizes names of a few common objects

Expressive

____1. adds rhythm to continuous chains of babbling

____2. imitates single syllable (ba/da)

____3. single syllable utterances (ba)

____4. babbles in response to parents

____5. coughs, cries for attention

____6. double syllable babbling (gaga, dada, or gaguh, bada)

____7. uses gesture language (raises arms to be lifted, etc.)

____8. adds tongue-tip sounds such as (t) and (d) and other sounds including /n/, /w/, /f/, /v/, and /l/, usually in combination with vowels

____9. changes inflection in babbling

____10. imitates gesture games (pat-acake, peek-a-boo)

____11. some word-like expressions (appears to be naming things in his own "language")

Unit 5

Receptive

____1. recognizes people visually)

____2. understands a few simple requests ("wave bye-bye" etc.)

____3. offers object upon verbal and gestural request (75% of the time)

____4. regularly stops activity to "no"

____5. regularly stops activity when name is called (signed)

____6. looks at pictures for one minute if pictures are named

____7. responds to a few meaningful expressions, particularly if expressions have definite action ("daddy's coming"), gestures ("doggy's all gone"), or facial expression ("ow-that hurts"); child will usually respond with facial expressions or actions

Expressive

____1. uses at least four different double syllables (dada, mama, babu, baba, etc.)

____2. varies syllables in babbling (badadado)

____3. uses gestural language appropriately (shake head for "no," waves for "bye-bye," rejects by pushing hand away, etc.)

____4. often combines babbling with gestures

____5. calls (gestures) for attention

____6. attempts to imitate intonation and number of syllables used by others

____7. imitates tongue click, fluttering tongue between lips, etc.

____8. uses a few exclamations (oh-oh)

____9. uses first word (often mama, bye-bye-, or dada)

____10. uses jargon: short sentence-like utterances of 4 or more syllables without meaning

Unit 6

Receptive

____1. follows simple directions 50% of time (put that down, push the car, come here)

____2. responds to simple questions (where's mama, where's the ball) usually by looking at correct object

____3. demonstrates understanding by making a few appropriate verbal (signed) responses such as "say bye-bye"; child says (signs) bye-bye (ba-ba)

____4. demonstrates understanding by responding with appropriate gestures to requests ("where's doggie?" child points to or pats dog)

Expressive

____1. uses the same sound combinations for words such as: "ba" for bottle, etc.

____2. at least 2-3 word vocabulary

____3. repeats sound or action or sign if laughed at

____4. imitates many sound sequences

____5. initiates speech gesture games (peak-a-boo, pat-a-cake)

____6. vocalizes (signs) in response to songs or rhymes

____7. "jabbers" to toys and people

____8. vocalizes in jargon (jabber) while playing alone

____9. imitates a few new words

Unit 7

Receptive

____1. demonstrates understanding of 1-3 familiar objects (usually toys or clothing) by pointing to, looking at, touching or giving correct object to parent

____2. looks at simple pictures (for 2 or more minutes) if pictures named

____3. regularly offers toys on verbal request

____4. recognizes a couple of body parts (eyes, nose, etc.)

____5. gives "kiss" on request

____6. senses psychological reactions and meanings of others and behaves accordingly

____7. understands a few new words each week

____8. understands more simple directions (getting objects, standing up, etc. "Get your___." "Where is the ___?")

____9. fights for desired object

____10. pats named pictures (pat doggie)

____11. blows candles, whistles, etc.

Expressive

____1. uses jargon (jabber) containing some true words

____2. at least 3-4 word vocabulary

____3. begins using one word for many meanings (over-extension)

____4. indicates wants by combining gestures with vocalizations or signs with vocalizations

____5. regularly says and waves "bye-bye" on his own

____6. imitates words (incorrectly) directed at him/her

Unit 8

Receptive

____1. begins associating objects with their pictures

____2. identifies several objects and a few pictures when they are named such as "find baby in picture," "where is the cup"

____3. recognizes 2-3 body parts (mouth, ears, eyes, hands) when they are named

____4. will bring familiar object not visible (from another room) upon request

____5. understands meaning of separation from parent and reacts strongly

____6. uses pencil or crayon to amuse self for brief periods upon request or when initiated by self

Expressive

____1. frequent use of such consonant sounds as /t/, /d/, /n/, /w/, /f/, /h/

____2. has a vocabulary of at least 5-6 words

____3. may say "tada" or "tata" (thank you) when given something

____4. uses jargon (jabber) with more pauses and greater pitch variation

____5. combines gestures with words or signs with words to indicate desires

____6. uses over-extensions (one word for several meanings)

____7. continues using jargon mixing with true words

Unit 9

Receptive

____1. indicates 2 out of 4 objects upon request

____2. begins to understand concept of categories such as food (understands that you eat cookies and bananas) and clothes (you put on shoes and socks)

____3. enjoys books-turns one page at a time

____4. can follow two orders concerning one object ("get the ball," "give the ball to me")

____5. enjoys simple rhymes and songs

Expressive

____1. vocabulary of at least 7-8 words

____2. uses words (signs) most of the time (rather than gestures) to indicate needs ("cookies," "milk")

____3. imitates words (signs) overheard in conversation

____4. begins raising voice in jargon for questions

____5. vocalizes during play using well-inflected jargon (voice moving up and down) with some true words

____6. continues to use over-extensions (one word for many meanings)

____7. names one or two familiar objects

Unit 10

Receptive

____1. can point to pictures of simple objects (especially clothes and body parts)

____2. knows meaning of "mine"

____3. knows 3-4 body parts on a doll

____4. distinguishes between me/her/him, example: give to me vs. give to her/him

____5. demonstrates understanding of simple verb forms such as "stop that," "sit down," etc.

____6. knows dressing sequence

____7. knows where things are kept

____8. very aware of color (enjoys looking at colors, and having colors named)

Expressive

____1. vocabulary of at least 10 words

____2. joins two words into one (allgone, allwet)

____3. reduplicates many syllables in jargon, e.g., baba, gaguh, dadaduh, etc.

____4. imitates environmental sounds such as animal and vehicle sounds (moo-o-o for cow, r-r-r for car, etc.)

____5. continues jargon mixed with true words (signs)

____6. continues over-extensions (one word for many meanings)

____7. names 2-3 familiar objects in pictures

____8. names several familiar objects in the home

____9. imitates some 2-word sentences

____10. indicates when pants are wet

Unit 11

Receptive

____1. follows three orders about the same object; example: Get the ball. Throw the ball. Give Mother the ball.

____2. recognizes new words daily

____3. loves to have simple books read to him/her

____4. knows 5-6 body parts on a doll

____5. recognizes many common objects and pictures of common objects

____6. follows a couple of very simple, related commands given at same time (sit down and eat)

____7. points to about 4 pieces of clothing on self (shirt, socks, shoes, dress, pants)

Expressive

____1. vocabulary of 20-50 words

____2. imitates 2 and 3 word sentences

____3. attempts to describe experiences using jargon mixed with true words (signs)

____4. combines words into simple ideas ("go bye-bye," "mommy come")

____5. answers many requests with "no"

Unit 12

Receptive

____1. follows 4 orders about the same object ("Pat the doll," "Get the doll," "Give me the doll," "Put the doll down")

____2. knows meaning of up-side down

____3. matches familiar objects

____4. can match 2 colors

____5. selects correct item from group of five or more items

____6. understands many complex sentences (get your book and we'll read the story)

____7. interested in radio and t.v. commercials

____8. understands concepts of "here" and "now"

____9. uses common objects appropriately

____10. understands a couple of descriptive words (dirty, wet)

____11. understands a couple of common pronouns (me, you, mine)

Expressive

____1. vocabulary at about 100 words

____2. many two-word utterances

____3. frequently asks for "more" or "another" when given gum, cookie, candy, etc.

____4. occasionally uses three-word sentences, ex: "daddy go bye-bye"

____5. refers to self using own name

____6. makes many syntax (word order) errors; example: "No go bed." "Me no go."

____7. Creates own words with own meanings

____8. names at least 5-10 objects in pictures and many real objects in the environment

____9. begins to eliminate jargon

____10. nouns predominate, some verbs, few adjectives, adverbs, and pronouns.

____11. repeats words (signs) in response to questions to indicate "yes" (parroting). Example: Parent--"Do you want a cookie?" Child--"Cookie"

____12. uses spatial terms (outside, here, over there)

____13. simple negatives ("no night-night.")

Unit 13

Receptive

____1. demonstrates understanding of verb forms by selecting correct picture (which shows eating?)

____2. understands "big"

____3. understands concept of "one" and "more than one" (many, lots)

____4. knows difference between "mine" and "yours"

____5. understands same and different

____6. recognizes photos of himself and other family members

____7. matches many pictures with objects

____8. identifies family name categories (baby, sister, mother, grandma, etc.)

____9. understands objects of actions: "Doggie is drinking milk"

____10. understands a couple of prepositions in context (in, on)

____11. separates pictures of objects into categories (dogs in one group, horses in another)

Expressive

____1. uses two and three word sentences

____2. no longer uses jargon

____3. fast increase of vocabulary (200-300 words)

____4. refers to self by pronoun ("me")

____5. begins using "what," "where," and "who" questions (especially ask for names of objects and activities--"What's that?")

____6. adds new pronouns such as "you," "I," "it"

____7. commands others ("you do ___", "tie my shoe")

____8. some nonfluencies (hesitates or repeats), particularly with initial syllable; may repeat words

____9. names 10-15 pictures

____10. imitates word sequences (3-4 words)

____11. asks for help with personal needs (washing hands, going to toilet, etc.)

Unit 14

Receptive

____1. understands common verbs

____2. understands common adjectives (cold, sleepy, hungry)

____3. relays messages

____4. understands many long and complex sentences

____5. understands size differences (big, little, etc.)

____6. holds fingers up to show age

____7. begins to take turns and shares (your turn, mommy's turn)

____8. often matches objects by their color

____9. points out smaller parts of the body (chin, elbow, eyebrow, etc.)

____10. identifies a few objects by their use ("Show me what Mom cooks on," "Show me what you wear on your feet")

Expressive

____1. vocabulary of 500-600 words

____2. regularly uses noun-verb combinations

____3. describes use of common objects (may not know name of object but calls its name by use)

____4. announces intentions

____5. enjoys describing experiences

____6. enjoys describing drawing (scribbles)

____7. gives full name when asked

____8. comments on what he is doing while he is doing it

____9. responds to what/where questions. ("What do you wear when you go to bed?")

____10. repeats nursery rhymes

____11. repeats two-three numbers (in series)

____12. grammar emerges (verb forms, plurals, possessives)

____13. uses affectionate terms (I love you)

____14. uses "a" and "the" correctly

____15. uses past tenses (often incorrectly--"I felled.")

Unit 15

Receptive

____1. carries out two-three commands given at one time

____2. understands new space relationships (under, behind, front, etc.)

____3. understands differences between "how," "when," "what," and "why"

____4. memory span lengthening (recalls many past experiences)

____5. remembers story order

____6. Attends to stories for up to 10 minutes

____7. engages in a lot of pretend play

____8. knows names of familiar places (house, store, Grandma's)

____9. understands at least 2-3 adverbs (fast, slow)

____10. knows own sex

____11. knows a couple of colors

Expressive

____1. 600-1000 word vocabulary

____2. 80% intelligibility

____3. uses 3-4 word sentences

____4. imitates 5-7 word sentences

____5. names 30-40 pictures

____6. whispers

____7. uses verb forms in describing action in pictures

____8. uses verb form correctly 50-75% of the time (boy is running)

____9. relates experiences from past (very simple account)

____10. uses at least 2-3 prepositions

____11. uses quantity adjectives (some, two, etc.)

____12. uses negatives (not, can't)

____13. uses a couple of temporal words such as tomorrow, yesterday

____14. uses plurals (often incorrectly)

____15. names one color

Unit 16

Receptive

____1. understands more sophisticated number concepts (rest of them, all of them)

____2. understands number concept of "two"

____3. identifies a couple of textural adjectives (hard, soft)

____4. identifies 3-4 colors

____5. understands many feeling words (mad, scared, happy, etc.)

____6. understands several personal questions "What is your name?", "How old are you?", etc.) and answers them

Expressive

____1. uses at least 2 adverbs (usually fast, slow)

____2. uses 3-4 prepositions (often adds under, beside, or by)

____3. describes use (function) of several objects or pictures of objects

____4. uses adjective opposites (hot-cold, big-little)

____5. names 2-3 colors

____6. counts to 3-4 (rote counting)

____7. uses a couple of conjunctions (and, because)

Unit 17

Receptive

____1. completes directions involving 4-5 different prepositions (put the ball ___the chair.)

____2. understands several comparative adjectives (bigger, biggest, etc.) by correctly indicating such things as: "Which is taller, a mother or baby"; "which is smaller, a dog or mouse?"

____3. follows commands about objects not present

____4. understands many time concepts (morning, afternoon, etc.)

____5. follows three-four directions given at one time

____6. understands number concepts of three and four

____7. understands "if-what" questions--"If you fell down what would you do?"

Expressive

____1. uses pronouns as objects (her, him, them)

____2. uses more difficult quantitative expressions: (just a little bit; just a few more)

____3. grammatically correct simple sentences about 65% of time

____4. uses future tense verbs

____5. still uses many who/-what/where questions, but now also uses "how" and "why" questions

____6. uses new possessive pronouns (his, hers, their)

____7. uses collective nouns (family, food, clothes etc.)

____8. uses contractions (it's, there's)

____9. names 3-4 colors

____10. says one nursery rhyme by heart (no prompting) or the blessing on the food

____11. relates stories from pictures

____12. talks to self in monologue (often make-believe)

Unit 18

Receptive

____1. understands about 2500 words

____2. identifies shapes (crosses, circles, triangles, squares)

____3. guesses name of hidden object when given language clues

____4. understands category questions and responds appropriately: "what swims?" "what flies?"

____5. loves action-filled stores: reacts with total body language (generalized gestures) while being told story

____6. describes functions of things "what is a key for?" "what is an umbrella for?"

Expressive

____1. 4-5 word sentences

____2. uses irregular plurals (leaves, deer)

____3. names all colors

____4. asks hypothetical questions ("I suppose that," "I hope ____")

____5. vocabulary of at least 1500 words

____6. describes feelings ("I feel sad")

____7. counts to ten (rote count)

____8. 90% intelligibility

____9. answers time of day/week questions (afternoon, yesterday, night time, etc.)

____10. protests inaccuracies (protests when someone tells stories wrong)

Unit 19

Receptive

____1. knows up to 5000 words

____2. understands what we do with eyes, ears, mouth, etc.

____3. knows what common objects are made of (book, window, house, etc.)

____4. understands many textural adjectives (smooth, rough, bumpy, etc.)

____5. points to penny, nickel, dime, upon request

____6. knows birthday

Expressive

____1. uses up to 2000 words

____2. sentences average 5½ to 6 words

____3. counts to twenty (rote count)

____4. uses common expressions ("I don't know," "excuse me, please," etc.)

____5. about one out of ten sentences is a compound or complex sentence

____6. 90% of sentences are complete

____7. asks questions for information

____8. controls people and situation with language

____9. reads by way of pictures

____10. tells long stories, confusing fact with fantasy

Unit 20

Receptive

____1. understands up to 7000 words

____2. knows concepts of oneness, twoness, threeness, fourness and fiveness

____3. begins to understand right and left

____4. points correctly to picture that is described (not named)

____5. knows all basic colors

Expressive

____1. uses about 2200 words

____2. sentences average 6 words in length

____3. defines many things in terms of what they are, what they do, and how they are used such as: wind, policeman, stove, horse, fork, etc.

____4. repeats four or five digits (in random order)

____5. makes serious inquiries (what is this for, what does it mean, etc.)

____6. uses all types of sentences, clauses and parts of speech

____7. prints simple words

____8. reads by way of pictures

____9. rote count to 30

____10. gives home address

AGE INTERVALS FOR LANGUAGE DEVELOPMENT UNITS

Unit 1:	0 - 2 months
Unit 2:	2 - 4 months
Unit 3:	4 - 6 months
Unit 4:	6 - 8 months
Unit 5:	8 - 10 months
Unit 6:	10 - 12 months
Unit 7:	12 - 14 months
Unit 8:	14 - 16 months
Unit 9:	16 - 18 months
Unit 10:	18 - 20 months
Unit 11:	20 - 22 months
Unit 12:	22 - 24 months
Unit 13:	24 - 28 months
Unit 14:	28 - 32 months
Unit 15:	32 - 36 months
Unit 16:	36 - 40 months
Unit 17:	40 - 44 months
Unit 18:	44 - 48 months
Unit 19:	48 - 54 months
Unit 20:	54 - 60 months

CROSS REFERENCES FOR
SKI*HI LANGUAGE DEVELOPMENT SCALE

(Numbers refer to sources on page 327)

Unit 1

Receptive

1. 1, 5, 9, 12, 13
2. 9
3. 9
4. 2, 3, 6, 9, 13

Expressive

1. 6, 8, 9, 12
2. 9
3. 1, 2, 8, 9, 10, 12, 13
4. 2, 3, 5, 6, 9, 10, 12, 13, 14
5. 2, 6, 8, 9, 12, 13, 18
6. 2, 3, 6, 9, 10, 13, 18

Unit 2

Receptive

1. 5, 8, 9, 10, 12, 13
2. 5, 9
3. 6, 9, 10
4. 6, 9, 14
5. 9
6. 2, 12
7. 13

Expressive

1. 8, 9, 10
2. 3, 6, 9, 12, 13
3. 2, 5, 6, 9, 10
4. 1, 2, 3, 6, 8, 9, 13, 14
5. 6, 8, 9, 10
6. 3, 5, 6, 9, 12, 13, 14
7. 9
8. 2, 8, 12, 13

Unit 3

Receptive

1. 9, 12, 13
2. 6, 9
3. 12
4. 2, 5, 9, 10, 12, 13
5. 12, 13

Expressive

1. 4, 9, 10
2. 2, 9, 12
3. 5, 8, 9, 10, 12, 13, 18
4. 5, 6, 9, 10, 12, 13
5. 2, 8, 9, 12
6. 3, 8, 9
7. 13

Unit 4

Receptive

1. 5, 9, 12
2. 2, 3, 5, 6, 9, 10, 12, 13
3. 9
4. 4, 8, 9, 12, 13
5. 6, 9, 12

Expressive

1. 6, 9
2. 8, 10
3. 9
4. 6, 9, 10
5. 6, 9, 10
6. 2, 5, 6, 8, 9, 12, 13
7. 6, 9
8. 2, 6, 9, 10
9. 6, 9, 10
10. 9, 12, 13
11. 12, 18

Unit 5

Receptive

1. 9
2. 1, 4, 5, 6, 8, 10, 12
3. 3, 9, 12, 13
4. 3, 5, 6, 8, 9, 10, 12, 13
5. 1, 4, 5,
6. 12, 13
7. 6, 9, 13

Expressive

1. 9
2. 5, 9, 10
3. 2, 6, 8, 9, 12
4. 2, 9
5. 2, 6, 9
6. 2, 5, 6, 9, 12, 13, 14
7. 3, 9, 13
8. 9, 12, 13
9. 2, 3, 5, 6, 8, 9, 12, 13
10. 1, 9, 12, 13

Unit 6

Receptive

1. 6, 9, 12, 13, 18
2. 8, 12, 13
3. 12
4. 6, 12, 13

Expressive

1. 6, 9, 10, 14
2. 8, 10, 12, 13
3. 5, 10
4. 2, 3, 5, 6, 13
5. 2, 6, 12, 13, 14
6. 9, 12
7. 3, 8, 9, 10, 12, 13
8. 5, 9, 12
9. 2, 4, 10, 12, 13

Unit 7

Receptive

1. 3, 6, 9, 10
2. 12, 13
3. 9, 13
4. 9, 13
5. 9
6. 9, 10, 12
7. 12
8. 3, 9
9. 6, 9
10. 9
11. 10

Expressive

1. 9, 12, 13
2. 4, 5, 6, 9, 12, 13
3. 9
4. 3, 9, 10, 12, 13
5. 9
6. 6, 9

Unit 8

Receptive

1. 9
2. 3, 5, 8, 9, 10, 12, 13, 14
3. 5, 10, 12, 13
4. 6, 12
5. 9
6. 18

Expressive

1. 9, 12, 13
2. 3, 5, 6, 9, 12, 13
3. 9, 13
4. 9, 10, 14
5. 5, 6, 8, 9, 12
6. 9
7. 5, 8, 9, 10

Unit 9

Receptive

1. 9, 12, 16
2. 12
3. 5, 9
4. 9, 12
5. 5

Expressive

1. 1, 5, 9, 13
2. 3, 5, 8, 9, 12, 13
3. 9, 12
4. 9, 10, 14
5. 5, 10
6. 9
7. 8

Unit 10

Receptive

1. 1, 3, 6, 8, 9, 12, 13
2. 9, 10
3. 3, 5, 6, 8, 9, 12, 13, 14, 17
4. 9, 12
5. 3, 10, 14
6. 9
7. 9
8. 9

Expressive

1. 5, 6, 12, 13
2. 3, 9, 10
3. 9
4. 10, 12, 14
5. 6, 9, 13
6. 9
7. 9
8. 9, 18
9. 5, 12
10. 9

Unit 11

Receptive

1. 6, 9, 14
2. 12
3. 9
4. 5, 6
5. 4, 6, 9, 12, 13, 14
6. 5, 6, 12
7. 13

Expressive

1. 3, 4, 6, 8, 9, 10, 13
2. 9, 13
3. 5, 12
4. 5, 6, 12
5. 10, 14

Unit 12

Receptive

1. 5, 9
2. 9
3. 9
4. 13
5. 9, 12, 14
6. 9, 12
7. 9
8. 9
9. 6, 9
10. 10
11. 10, 14

Expressive

1. 2, 5, 10
2. 5, 6, 8, 9, 10, 13, 18
3. 4, 9
4. 6, 9, 12
5. 1, 6, 9, 10, 12
6. 12
7. 9
8. 6, 8, 9, 10, 13, 14
9. 5, 9
10. 5, 6, 8, 9, 10, 12
11. 10
12. 10
13. 10

Unit 13

Receptive

1. 12
2. 1, 3, 9
3. 3, 9, 10, 14
4. 3, 5
5. 10
6. 9
7. 9
8. 12, 14
9. 9
10. 6, 10, 14
11. 10

Expressive

1. 3, 6, 9, 12, 14
2. 9, 10
3. 2, 6, 9
4. 3, 9, 10
5. 8, 9, 10, 14
6. 10, 12, 14
7. 9, 10
8. 9
9. 4, 9
10. 9, 14
11. 3, 9, 12, 18

Unit 14

Receptive

1. 3, 4, 12
2. 10, 12
3. 9
4. 12
5. 9, 10, 12, 13, 14
6. 9
7. 4, 9, 10, 14
8. 9
9. 3, 12
10. 6, 9, 14

Expressive

1. 2, 9
2. 6, 10
3. 6, 8, 9, 13
4. 9, 10
5. 9, 10, 14
6. 12
7. 1, 9, 12, 13
8. 9
9. 14
10. 3, 6, 8, 9, 10
11. 6, 12, 14
12. 4, 8, 9, 13
13. 16
14. 10
15. 10

Unit 15

Receptive

1. 1, 3, 10, 12
2. 3, 8, 12, 13
3. 6, 9, 12
4. 9
5. 6, 9, 10
6. 9
7. 9
8. 10
9. 10, 14
10. 3, 6, 7, 9, 13
11. 14

Expressive

1. 2, 5, 9, 10
2. 5, 9, 10
3. 3, 9, 10
4. 9
5. 9
6. 9
7. 3, 9, 10, 12, 13
8. 10
9. 3, 6, 12, 13, 18
10. 10, 14
11. 10, 14
12. 1, 10
13. 10
14. 3, 10, 12, 14
15. 4

Unit 16

Receptive

1. 10, 14
2. 10
3. 10, 14
4. 10
5. 3
6. 10, 19

Expressive

1. 10, 14
2. 3, 10, 14
3. 10
4. 10
5. 3
7. 2, 14

Unit 17

Receptive

1. 10
2. 6, 10, 13
3. 6
4. 19
5. 10
6. 10, 14
7. 14

Expressive

1. 6, 10
2. 10, 14
3. 10
4. 10, 14
5. 3, 10
6. 10, 14
7. 10
8. 16
9. 13
10. 4, 17
11. 6

Unit 18

Receptive

1. 10
2. 14, 19
3. 10, 19
4. 6, 10
5. 6
6. 10, 14

Expressive

1. 6, 13
2. 10, 14
3. 4
4. 10, 19
5. 10
6. 10
7. 16
8. 2
9. 10
10. 13

Unit 19

Receptive

1. 16
2. 19
3. 16
4. 14
5. 14, 15
6. 3, 7

Expressive

1. 2, 19
2. 6
3. 3
4. 15
5. 16
6. 16
7. 15, 19
8. 15
9. 3, 17
10. 2, 3, 7, 19

Unit 20

Receptive

1. 16
2. 16
3. 19
4. 19
5. 16

Expressive

1. 2, 15, 19
2. 19
3. 15, 19
4. 14
5. 3
6. 19
7. 18
8. 16
9. 3
10. 7

SKI*HI LANGUAGE DEVELOPMENT SCALE

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AUDIOLOGICAL SERVICES

Audiological services for the SKI*HI Model include initial diagnostic services, ongoing audiological testing and hearing aid services.

Diagnostic Audiology - the SKI*HI Way

Entrance into the SKI*HI Program and thus services to the child and family are dependent upon diagnosis of a hearing loss. A child must be diagnosed by an audiologist as having a hearing loss before the family enters the program and receives services.

Early identification of infants and young children with hearing difficulties is initially dependent on finding these children. The statewide hearing screening system, the public awareness program and the referral system should achieve this goal of early identification.

When a referral is received or when a suspicious and anxious parent indicates concern over his/her child's hearing it is extremely important to act with haste in identifying or ruling out a hearing problem. Should it be difficult to schedule a clinical evaluation of formal testing in an acoustically controlled environment within two weeks from initial contact with the parents, a parent advisor is sent to the home to do environmental testing. Such testing in the home may help the parent identify behavior responses to stimuli. Also, should there remain concern for the hearing, there is someone to provide direction and support to the family during the diagnostic process. Such environmental testing data is very helpful to the audiologist in providing behavioral information on the child.

When formal testing can be accomplished within two weeks post initial contact, a home visit by the parent advisor for environmental testing is not necessary. It is important, however, that the parent advisor and/or parent advisor supervisor be present with the audiologist at the time of clinical testing. This serves several purposes including, having professional assistance to the audiologist in conducting the testing, providing parent support, and being present with the family during counseling. This is particularly important should a hearing loss be clearly identified. The parent advisor will also have immediate input regarding the degree and type of hearing loss and what the next steps will be.

Medical evaluation by an otorhynolaryngologist either follows or preceeds the initial audiological evaluation. The purpose of this is twofold: (1) to rule out medical intervention for possible hearing loss, (2) obtain medical clearance for making earmold impressions should that be necessary.

Should a hearing loss not be clearly ruled out or identified during initial testing (an occurrence not uncommon with infants) the parent advisor will begin home visits to further observe and record the child's responses to auditory stimuli and give support to parents. (See forms in Reporting Section.) During this time it is also worthwhile to develop with the parents a greater awareness of how to and what to look for in observing behavior responses to auditory signals.

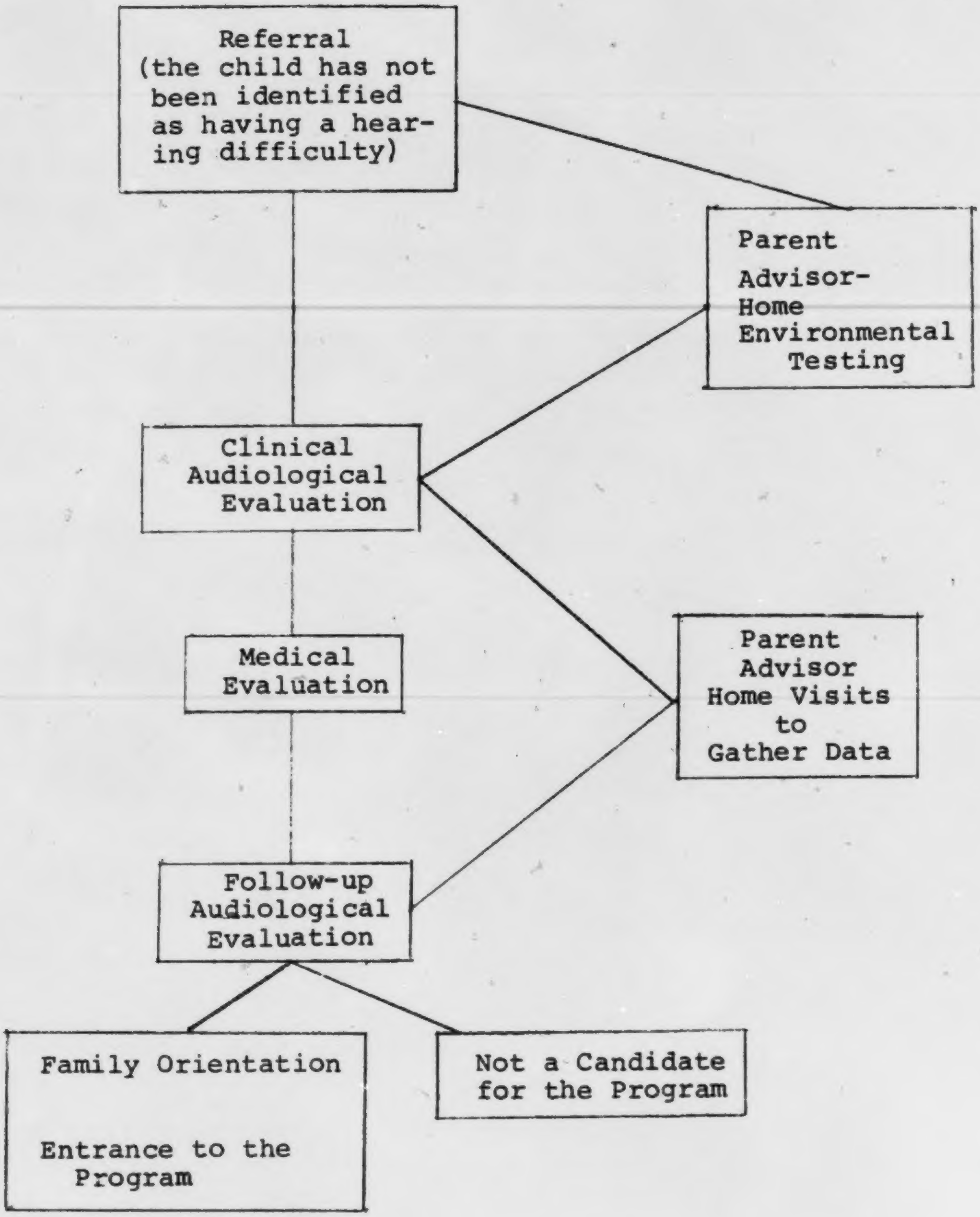
These visits should continue on a regular basis until medical evaluation has been completed and follow-up audiological evaluation has been made.

If medical intervention has been ruled out prior to audiological follow-up and medical clearance has been given to make earmold impressions these should be made prior to the testing. Valuable time is saved in fitting the infant with amplification. It is also helpful to have the earmolds on hand at the testing so that the audiologist can use them to further clarify whether or not a hearing loss does exist. The parent advisor should be in attendance at this testing so that should hearing aids be deemed appropriate the fitting can be accomplished with the necessary staff present.

Occasionally additional testing may be needed to obtain sufficient data for making the appropriate decisions. Should this be so, the parent advisor is to continue visiting the home and gathering data.

As soon as a hearing loss has been identified a family orientation is scheduled and formal entrance into the program is accomplished.

DIAGNOSTIC AUDIOLOGY
THE
SKI*HI WAY


Referral (the child has not been identified as having a hearing difficulty)
Parent Advisor-Home Environmental Testing
Clinical Audiological Evaluation
Medical Evaluation
Parent Advisor Home Visits to Gather Data
Follow-up Audiological Evaluation
Family Orientation
Entrance to the Program
Not a Candidate for the Program

AUDITORY RESPONSE DATA

Child's Name

Parent Advisor

		Alerting	Searching	Localizing	Discriminating
Date:	To Environmental Stimuli				
	To Voice				
Date:	To Environmental Stimuli				
	To Voice				
Date:	To Environmental Stimuli				
	To Voice				
Date:	To Environmental Stimuli				
	To Voice				

HEARING AID SERVICES

This section of the manual will describe the SKI*HI hearing aid system. This system includes: (1) a bank of hearing aids; (2) a hearing aid lending system; (3) a hearing aid evaluation system; (4) hearing aid analysis; (5) a hearing aid mold program and (6) a binaural and monaural hearing aid philosophy. The hearing aid program in the home is entitled "Home Hearing Aid Program" and is in the first section of the home intervention program.

Background and Introduction

Traditionally, a child is seen for hearing evaluation and hearing aid evaluation and an aid is decided upon by the audiologists. The aid is purchased and fitted.

This system seems appropriate for older hearing aid users where definite audiological testing can be done and the patient can respond to the effect of the hearing aid. However, this system was found to be completely inadequate for infants and young children. These young children were being fitted with unappropriate amplification because of the difficulty of determining exact levels of hearing and the child's reaction to the aids.

Amplification should be custom fit to a person as close as possible. With infants and young children in a home environment, it is impractical and impossible to use sophisticated clinical instrumentation to attempt to prescribe the aid itself, much less the pitch and frequency response. The Project determined that the most appropriate way to determine the appropriate amplification for an infant was to try several aids on the child and collect behavioral data; and from this and clinical data make decisions concerning permanent fitting of aids. From this philosophy came the need for a hearing aid bank, a loaner system and an evaluation system.

Hearing Aid Bank

After consulting with a team of clinical audiologists, hearing aids were selected for the hearing aid bank. It was determined that the Project should acquire a selection of aids for each of the categories of hearing loss (profound, severe, moderate, and mild). The numbers of hearing aids necessary in each hearing loss category were determined by the percent of Project dhilren to date in the different hearing loss categories. We then calculated how many hearing aids would be necessary at any time for the hearing aid evaluation program and for loaners.

A hearing aid bank that provides aids for the evaluation and selection process plus provide loaner aids should have enough aids to insure an adequate selection of trial aids. Data from five years' experience indicates that a bank will need at least two aids for each child in the program. Even though over half of the children will be fit with their own aids and will use the bank for occasional loaner service, there will need to be sufficient aids to cover for aids being repaired, aids being mailed to homes and still have an adequate selection.

The types of aids, body or ear level, must be determined by the Program. The Utah Parent Infant Program has shifted from almost exclusive use of body aids to use of mostly ear level aids. Thus shift came as a result of data from use of trial ear level aids. This data indicated better acceptance of aids by children, parents preferred ear level aids, less damage and maintenance and child performance while amplified.

Even though ear level aids are sometimes difficult to keep on infants, the advantages as reported by parent data far outweigh these difficulties. Most of the problems of keeping the ear level aids on the children have been solved by the use of various types of adhesives such as taupe tape, denture adhesive, medical skin adhesives and double faced tapes. Data also indicates there are no specific audiological problems associated with ear level aids on infants. Current ear level aids have the capabilities of amplifying any hearing loss adequately.

Acquisition of aids is, of course, a very crucial aspect of a hearing aid system. Whether a program has a hearing aid system or not will depend on the acquisition of a bank of aids. The SKI*HI Program currently has an adequate hearing aid bank and has used the following in acquiring new aids:

(1) A line item in the annual operating budget allows for purchase of 10 to 20 new aids each year.

(2) The original BEH grant made possible an initial stock of aids.

(3) Hearing aid Dispensers and manufacturers have consigned hearing aids to the program without cost.

(4) A foundation contributed funds for the purchase of aids.

Hearing Aid Loaner System

It is of utmost importance that children in the Project receive consistent, appropriate amplification. In order to maintain consistent amplification, the Project maintains a stock of loaner aids. If an aid needs repairs, the Project provides loaner amplification while the broken aid is being repaired. Parents call the Project collect any time to ask for loaner amplification equipment. The policy of the Project is: "No child will be without amplification for more than 24 hours." Parents are to have an extra accessory supplies on hand so down time will be kept at a minimum. Vests, vest pockets, tubing, receiver savers, washers, adapters and baby covers are also available on a loaner basis.

Home Hearing Aid Evaluation Program

Under the direction of the managing audiologist, Children in the Project try different aids to find the most appropriate amplification. Precise audiological information on very young children is difficult to obtain. The typically limited information from the initial evaluation makes it difficult for the audiologist to make a precise recommendation concerning the very best amplification program for the child. The Project provides a program whereby the child can try three to four different hearing aid systems while parents and parent advisors keep data on the child's responses to the different aids. This data, along with the audiologist's clinical tests, determine what hearing aids the family will obtain for the child.

Procedures

After the managing audiologist fits the initial hearing aids on the child, and the aids are worn on a full time basis, the parent advisor contacts the educational audiologist to request initiation of home hearing aid evaluation program. The educational audiologist works out a program for the child and sends one copy of this program to the managing audiologist and to the parent advisor. He/she will also send the first set of trial aids to the parent advisor. Each set of trial aids should be kept on no longer than two months.

When sufficient data has been obtained (this may take less than one week), the parent advisor notifies the educational audiologist that she is ready for the second set. When she receives the second set, the first set is taken off the child and mailed to the educational audiologist. This procedure is continued until all aids on the home hearing aid evaluation program have been tried.

At the end of the trial period, the data sheet is sent to the educational audiologist and discussed with her during a phone conference. Based on this, recommendations are made to the managing audiologist. He will then do a final clinical test of the child with the recommended aids and then make recommendations for the parents to purchase the aids.

If the family is on State Health services and is financially eligible, State Health will purchase the aids for them. If a family is not on State Health services, they are advised of this option and given appropriate direction to investigate eligibility. This is done before final clinical testing with the recommended aids from the trial program.

If the family does not qualify with State Health Services, they are directed to a reputable hearing aid dispenser in the local area to purchase the aids.

Binaural Amplification Philosophy

Use of binaural amplification in young children with hearing impairment has been a subject of considerable discussion and controversy for many years. Some proponents of binaural amplification are very adamant, outspoken and forceful in recommending binaural amplification for every hard-of-hearing child almost without regard for etiology, magnitude and/or contour of the hearing loss, tolerance problems, etc. Very little hard-core data exists to support such a philosophy and, in fact, certain evidence suggests that such an approach can be detrimental to the progress of some children. On the other hand, some audiologists refuse to fit children with two hearing aids and even when a single aid is fitted, the fitting is deferred until the age of two or three years, when the child can supposedly "manage" and "adjust" the instrument. The second approach is equally indefensible and will almost certainly impede progress of the hard-of-hearing child in acquiring speech and language skills.

Fundamentally, the philosophy of Project SKI*HI, as it relates to hearing aid amplification for hard-of-hearing children, is based on the belief that hard-of-hearing children should be fitted with true binaural wearable amplification systems as early in life as is possibly feasible when there are no audiological or medical contra-indications. Furthermore, it is the philosophy of Project SKI*HI that two hearing aids should be worn until such time that behavioral and/or audiological data strongly indicate that a single hearing aid is preferable. This philosophy does not presuppose that every hard-of-hearing child be fitted with two aids.

Although questions can legitimately be raised concerning the relationship between use of binaural hearing aids systems and the hard-of-hearing child's capacity to learn or understand spoken language, the following binaural psychoacoustic phenomena have been demonstrated in normal adult listeners using research instrumentation:

1. When threshold is measured under conditions involving presentation of pure tones or speech to two ears as opposed to one ear, a three dB improvement in threshold has been repeatedly reported under the binaural presentation occurs only when the two ears are identical in sensitivity.

2. The 3 dB improvement in thresholds resulting from listening through two ears rather than one ear is perhaps less significant than the 10 to 12 phon increase in loudness reported at suprathreshold levels.

3. Binaural listening provides for improved differential sensitivity. In other words, the different limen for both pitch and frequency are smaller when the presentation is to two ears rather than one.

As implied above, little is known about the relationship between certain binaural phenomena and speech intelligibility. However, other binaural phenomena have a more direct relationship to speech intelligibility. One definite advantage of binaural amplification relates to an increased likelihood that the parent will hear when the speech signal originates from either side of the head. In the case of monaural hearing aid use, the listener is at a definite disadvantage when the speech signal originates on the side opposite the hearing aid. The head shadow reduces the over-all signal strength by approximately 7 dB and, in addition, high frequency components of the speech stimulus are attenuated more than low frequency components if diffracting around the head. The result is a decrease in speech discriminatory capacity when speech is directed at the listener from the side opposite the hearing aid. The problem is accentuated when speech originates from the side opposite the aid and background sound originates from the side of the hearing aid. When two hearing aids are used, the head-shadow effect is eliminated and one ear is always in an advantageous position. When a person is required to listen in a background of noise and is allowed to use two ears as opposed to one ear, the effect is equivalent to reducing the intensity of the background noise. The phenomenon is referred to as the background squelch effect and, in some situations, the background squelch effect can result in a significant improvement in speech discriminatory capacity in adults. It must be assumed that the same advantage applies to children as well.

Localization ability is also enhanced by the use of two hearing aids. While it is recognized that localization ability is not related to capacity to understand spoken language in the strict sense of the word, localization skills are related to speech understanding in an important way. Specifically, children with hearing loss often obtain significant cues to intelligibility through speech reading and localization skills permit the child to find and attend to the speaker earlier than would be the case without localization skills.

The advantages gained from binaural amplification over monaural amplification are often very difficult to measure objectively in a formal testing environment and the advantages are most often virtually impossible to measure in young children. There has been subjective data obtained from adults, which likely applies to children as well, relating to the advantages of binaural amplification. In brief, binaural hearing aid users often report that speech is subjectively easier to understand when received through two hearing aids, that the strain and worry associated with listening is decreased and that communicative involvement is much more enjoyable.

The philosophy of Project SKI*HI is that every child should be given maximal opportunity to hear and that the opportunity is maximized through binaural amplification in the majority of instances. This is not to imply that every child receiving Project SKI*HI services will receive two hearing aids. A small minority of children are not candidates for binaural amplification for either medical or audiological reasons. The first decision concerning monaural versus binaural amplification in young children is made on the basis of behavioral observation and careful charting of auditory behaviors by the parents and parent advisor. In the majority of instances, progress in speech and language acquisition and development is much faster when two aids are used than is the case when one aid is used. Most children receiving Project SKI*HI services use two hearing aids. In short, every effort is made to achieve an optimal fitting for each child using whatever methods and/or techniques available.

Hearing Aid Analysis

In order to ensure maximum amplification, it is mandatory that the hearing aids be performing at factory specified levels. To guarantee this maximum hearing aid performance, all hearing aids are electroacoustically analyzed before being sent to the child, prior to clinical evaluation and periodically as need dictates.

Hearing Aid Molds

Amplification cannot be consistent or appropriate if molds are falling out or if molds are too small or poorly fitted, causing feedback. Children from one to five years grow rapidly and the necessity for new molds may be as often as every two months. Experience indicated that days, weeks and even months of amplification was lost because of mold problems. When the molds became too small, most parents turned the aid down to eliminate feedback. They often turned them down to a level where the child no longer received true amplification.

For the above reasons, molds are provided for Project children without cost to the parents. The parent advisor is in the home weekly and checks molds. When a new mold is indicated, impressions are made in the home by the parent advisor and then sent to the educational audiologist for processing and ordering. The new molds are sent directly to the home.

Forms for Hearing Aid Evaluation

The following forms are used in the home hearing aid evaluation program:

1. Record Hearing Aid Worn: This form is filled in by the parents to indicate how the child accepts the first set of hearing aids. Typically, the data is collected for two to three weeks. After the child wears the hearing aids about half of his waking hours, the aids are considered accepted and the Parent Home Hearing Aid Evaluation Form is introduced. See Parent Notebook.

2. Parent Home Hearing Aid Evaluation Form: In order to obtain information concerning the child's responses to one set of aids versus another (one aid versus two), parents record data daily on this form. Such things as time worn, sounds, child's responses to utterances and attitude of child, etc. are noted. See Parent Notebook.

3. Parent Advisor Home Hearing Aid Evaluation Form: The Parent Advisor observes the child during the home visits, obtains speech and language samples and does some environmental hearing testing. She records her data on this form concerning the child's performance with one set of hearing aids at different settings versus another at different settings. See Reporting.

4. Hearing Aid Evaluation Form: The Parent Advisor writes summary statements concerning the child's responses to one set of aids versus another and her recommendations. This comparison data is discussed with the educational audiologist and managing audiologist to determine which set of aids parents should obtain for the child. See Reporting.

MATERIALS AND EQUIPMENT FOR PARENTS AND CHILD

In order to insure a maximum beneficial effect of Parent-Infant Home Program, it is necessary to provide some materials and equipment which is not available in the home, but is necessary when the family has a hearing impaired infant. The SKI*HI model provides hearing aid molds, loaner hearing aids, video cassette playback units and total communication tapes and a book loan system.

Hearing Aid Molds

Amplification cannot be consistent or appropriate if molds are falling out or if molds are too small or poorly fitted, causing feedback. Children from one to five years grow rapidly and the necessity for new molds may be as often as very two months. Experience indicated that days, weeks and even months of amplification was lost because of mold problems. When the molds became too small, most parents turned the aid down to eliminate feedback. They often turned them down to a level where the child nc longer received true amplification. Data indicate children under two years of age need new molds every two months, while children two to four need new molds every four to five months.

For the above reasons, molds are provided for Project children without cost to the parents. The parent advisor is in the home weekly and checks molds. When a new mold is indicated, impressions are made in the home by the parent advisor. The new molds are sent directly to the home without cost to the parents. This has eliminated almost all hearing aid mold problems. Hearing aid molds are budgeted for as a program operating expense.

Loaner Hearing Aids

It is of utmost importance that children receive consistent, appropriate amplification. In order to maintain consistent amplification, the program maintains a stock of loaner aids. If an aid needs repairs, the program provides loaner amplification while the broken aid is being repaired. Parents call the PIP office (collect) any time to ask for loaner amplification equipment. The policy is: "No child will be without amplification for more than 24 hours." Parents are to have an extra cord and batteries on hand so down time will not be caused waiting for these items. Vests, vest pockets, tubing, receiver savers, washers, adapters and baby covers are also available on a loaner basis.

Parents sign the enclosed form. The aids are analyzed before they are sent out and are in good operating condition. Parents do not pay rent but do pay repairs if the aid is damaged or needs repair while they are using it.

Video Cassette Playback and Total Communication Tapes

In order to effectively teach families total communication, it is necessary to give them constant daily exposure to the signs. The video cassette program enables the parents to slip a cassette tape into a playback unit, turn their family T.V. on, and view the signing lesson as many times during the week as they desire.

The Program tried holding total communication classes for the families. The distance some parents had to travel (Parents were scattered throughout the state) posed a problem. Also parents entered the program at different times and it was difficult to deal with the newcomers in the class since they had not learned the signs from the first lessons. Many parents entered the Program before or after the class was taught and of course missed the vital training they needed. Varying proficiency levels of parents in the class was another problem. In short, it was very difficult if not impossible to meet the individual needs of families by conducting signing classes.

The video cassette program solved those problems. Now families can begin the tapes as soon as they enter the total communication program and can use the tapes on their own proficiency levels.

The Program provides a 3/4 inch video cassette playback unit for parents. The unit is placed in the home without cost to the parents. If they need a T.V. set, loaners are available. Parents sign a form accepting responsibility for the unit. The house insurance policy number is taken as this policy will cover the unit. The unit is usually left in the home for three or four months depending on the demand for playback units. Total communication tapes are loaned to the family without cost. The tapes are mailed from the office to the home.

Parent Resource Library

Parents of handicapped children usually have a need for more information about their child's handicap and related topics. The SKI*HI model uses the Parent Resource Library which is an outreach program of the Exceptional Child Center at Utah State University.

The Parent Resource Library is a collection of books and booklets containing practical and useful information to help parents of handicapped children. The materials cover a wide variety of topics and were chosen for their down-to-earth nature. The books and booklets show you, as parents, many ways to help teach and deal with your handicapped child in daily life.

The Parent Resource Library serves all parents of handicapped children and adults in the four-state area of Utah, Idaho, Wyoming and Nevada.

The library is located in the Exceptional Child Center at Utah State University, Logan, Utah. To make the library more convenient to parents, a mailing system has been set up. Books or booklets ordered by the parents will be sent directly to them for one month with instructions for return mailing. There is no cost to the parent in using the library or the mailing system.

The library has many books and booklets on a wide variety of topics, which are divided into these subject areas:

- Behavior management
- Books for brothers and sisters of handicapped persons
- Cerebral palsy
- Chronically ill
- Developing learning at home
- Hearing impaired
- Learning difficulties
- Mental retardation
- Physically handicapped
- Recreation
- Residential care
- Services and directories
- Sex education
- Speech and language development
- Training in self-help skills
- Visually impaired
- Vocational planning

PROJECT SKI*HI

A STATE INFANT PROGRAM FOR THE HEARING IMPAIRED

Received from the Utah Parent Infant Program, a statewide infant program for the hearing impaired, one hearing aid:

Make ________________ Model No. __________ Serial No. ________

The aid is to be used by _________________________. If for any reason this aid is not used by the above named, it will be returned to the Parent Infant Program.

I acknowledge receipt of the above hearing aid to be used on a loan basis.

I will assume the following responsibilities concerning this aid:

1. I will take proper care of the hearing aid.
2. When mailing this aid to the Parent Infant Program office or another party, I will pay for postage and insure it.
3. I will assume financial responsibility for repairs on this aid from the time it leaves the Parent Infant office (where it is electro-acoustically analyzed) until it is received again by the Parent Infant Program office.
4. I will send this aid into the Parent Infant Program office if it needs repairs.

Date: ___________________ Signed: _____________________________

Parent or Guardian

PSYCHOLOGICAL SUPPORT SERVICES

Psychological services are viewed as an essential part of an infant intervention program. When a program deals with parents of infant or young handicapped children, the psychological climate is most often strained. Most parents of handicapped children need psychological assistance to some degree.

Psychological Role and Training of Parent Advisors

Although it appears patently obvious that there are profound differences between the home environment and that of an institution, if these differences are not taken into account, a number of problems are likely to arise. First, there are the usual concerns persons have of exposing themselves to the scrutiny of observation by others. A moments reflection on this can generate many hypotheses for probable cause. Among these are the emphasis placed by the mass media on a clean, well scrubbed, neatly ordered home. Secondly, the natural resistance many persons have towards professionals or others who may be evaluating their performance. Third, the wish to convey the impression that the home reflects economic well-being.

Even though the parent advisors are scheduled at a regular time on a set day, and visits are known in advance to the parents, it is a rare occurrence that the home looks like it was prepared for a party. Rather, often the presence of other young children and the day-to-day activities of the household leave the home environment in some disarray, and the parents as a consequence apologize for the "mess." Programs which involve observations within the home, probably experience similar reactions. When the parent advisors enter homes they "see" the home situation without the usual filters of social convention. The meeting takes place outside of the neutral manicured office, without company manners, and children often exhibit their usual, rather than their best behaviors. The parent checks the parent advisors out for censure or other forms of disapproval. This checking out may not often be obvious but goes on nonetheless. Selection of parent advisors should be such that the parent's fears are soon dispelled and a new relationship begins. The parent advisors often being parents themselves, tends to strengthen this relationship. PA's thus are often seen as friends and confidantes in one aspect of their role.

Most of the PA's have been well-trained at the Bachelor level or beyond in the aspects of deafness. Thus they are able to answer technical questions with authority and so provide the feeling of professional competence. The whole process has a tendency to break down the usual social defenses which are generally present in professional encounters outside the home in other settings. The result has been that the PA's become friend, confidante, and professional helper all at the same time. These roles generally are present without the usual restraints often felt in such roles, i.e., friends are likely to talk at church or behind one's back, confidants are not knowledgeable about deafness, and unlike other professionals the parents feel like they can talk with them like a friend.

Given the PA's training and the natural inclination of the parents, the training functions of the PA often become blurred. For example, they can answer questions regarding deafness, the use of hearing aids, and other problems related to the disability, with authority. But on the other hand, problems relating to the psychological aspects of the disability, familial discord, and more severe pathological reactions are not in the PA's repertoire. Thus, it has been our experience that the PA's can become involved in the family beyond the competency of their training. This is not so much a reflection of their training as it is a reflection of the inner set of circumstances surrounding home-based programs.

One area of psychological support which might be mentioned is in the area of child development. The staff should have ample internal resources to meet most of the needs in this area with little help from the psychologist.

A continual difficulty encountered by the PA's centers about their need to keep parents task oriented in following through with the training. Often the PA's must listen to the parent talk in great length about seemingly non-related tasks before they are able to proceed with the training. PA's often ask for help from the psychologist in these matters. Much of the psychological training time as well as individual consultation time is devoted to this matter.

Related but not synonymous with the above is the problem of when to intervene. This question often comes up with regard to problems of family discord such as divorce actions, alcoholic spouses, and in-law troubles. The parents will often attempt to get the PA to take sides, or give advice. At other times the PA will note a discrepancy or conflict and wish to intervene. A rule of thumb with regards to matters of intervention. It seems that the entrance into the home is based upon the child gaining language skills. We should intervene to the degree that the intervention will directly relate to our being more effective with the training program. If we go much beyond these bounds, we will be moving not only beyond the scope of the Program, but into areas in which more adequate service can be given by other agencies.

There are times, however, when some intervention seems necessary. Generally this is done to provide a basis for referral to another more appropriate agency. There may be instances where some psychological intervention is appropriate.

Referrals may be made to other more comprehensive agencies dealing with handicaps, such as children's services of the state. Referral may also be made to local psychologists for specific interventions. For example, a school psychologist may be called upon to help with an overprotective mother. A meeting may be arranged between the school psychologist, project psychologist, parent advisors, and interested school authorities, with the local psychologist providing the service and follow through.

The PA's often become the psychological consultants to the home. This has not been by design, but has developed as an outgrowth of the role of the PA's. To meet this need, training sessions should be developed to give the PA's needed skills in listening, reflecting, and understanding. Further there should be inservice seminars and reaction to disability, basic psychological processes, and normal adjustment. These sessions plus the psychologist-PA-individual sessions provide an effective basis for dealing with many of the psychological problems that may arise in the project.

Psychological Climate

The home intervention program will likely have a philosophy and direction which has an affect on psychological function. First, neutrality should be developed with regard to the "oralist-total" tradition in deaf education. The PA's background should enable them to field most questions with ease. Staff training should be designed to help them understand and respond to various pressures the parents face when they must make choices. Most counseling theories recognize the need to remain separate from the decision-making process yet provide helpful data based on current knowledge.

Parents can be utilized and in fact are the Program's best spokesmen. Panels and other public relations devices can be valuable in breaking down the isolation so often experienced by parents when they face a handicapping situation. A word of caution is in order. It can become easy for the staff to utilize to too great an extent the services of one or two parents. Often these are the parents who are most articulate, have followed the program well, and whose children have made substantial gains. The staff of the Program must be always on the alert to be sure they are not excluding parents who need the experience more. It is possible, for example, that they may be creating too high an expectation in new parents. We have also observed that a parent may be devoting too much effort in this area in order to thank the Program or to keep from having to deal with some unpleasant reality, either the home situation or the disability.

Programs often have contact with many other agencies and often shares clients in common. It is important to clarify roles among professionals beforehand and during the rehabilitation process. Parents often experience conflict when it appears that two or more agencies are providing services or advice which overlaps. In the area of psychological services, choices are most often determined by the following considerations. First, is the parent seeking services which go beyond the scope of the project? Second, which program will be able to provide long-term follow up? Third, what is the real nature of the services sought? Most often these decisions are made in the case conferences.

Psychological Model

The psychological model assumes that most reactions seen and dealt with are normal reactions to disability. Generally the parent is contacted as soon as possible after the diagnosis is made. For the parents this is a time of denial, confusion, and misunderstanding. To be sure, many parents suspected that something was wrong with their child before they received the diagnosis, but the reality of the situation has not had its full impact.

After the initial denial and confusion stage, it is not uncommon for the parent to experience depression and anger. The PA's at this time may try to counteract the emotion directly, i.e., make the person be less depressed. What must be understood, however, is the need for the parent to experience these feelings and get them out of his system. For the PA, this period requires understanding and listening skills rather than trying to talk the parent out of the feelings or "doing something about it." Anger and depression are often followed by a period of withdrawal and quietude. This period may also include some resignation on the part of the parents. It is a time in which the parent begins to see and appreciate that a large number of handicapped reside, work, produce, and lead normal lives in society. Psychologically the parent begins to see the child as having a future and begins to accept him with his handicap. Parents begin displaying photographs of the child with the hearing aids exposed, talking about more profoundly disabled children and being comfortable taking the child out in the public and displaying him with his aids on. In short, this is a time in which the parent begins to reintegrate the handicapped child as a normal child accepting him as he is, not as he might have been, into their own self concept. During this stage and the one beyond, the parent can explore possibilities with greater clarity and understanding. If possible, any decisions as to long-term planning should be delayed until the parent is well into this phase. The last phase in the process is the back to normal phase. It should be understood that this process may occur several times in the rehabilitation process and can be precipitated especially at times of stress.

Parent advisors are often called upon to help the parents deal with problems created by other sibs and neighborhood children. Fortunately, most of the PA's have had enough experience with deaf persons to know that the child does not need "special treatment." As a consequence, the PA can help the parent let the child go. Deaf children can play rough, fight, cry, and, in short, experience just as any other child. The child can learn to keep sand out of the aid and when old enough explain the aid and its function to others.

Fortunately, we have not seen much rejection of children by parents. Rather, we seem to see more instances where the parent may overprotect the child, or use the child to hold an otherwise disfunctional marriage together.

The psychological model related to child development postulates several propositions. Children are motivated by a need to propensity to explore and master the environment. They seek experience and mastery from a very early age, and we encourage the parents to create a climate in which this can safely be accomplished. Clearly being a parent carries with it a number of risks. These risks are present in parenting of normal children and are perceived more profoundly when the child is disabled.

The project also attempts to help the parent understand that many of the parental expectations are based upon the parents needs rather than those of the child.

Role of Psychologist

The psychologists role includes individual consultation and training to the staff; running of parent groups; participation in case conferences; evaluation of selected families, including visits to the home; and some coordination with other community agencies.

Child Staffing

A. A quarterly staff meeting for each child will be held in order to accumulate appropriate and current information about the children in the project and those seeking the projects services. The appropriate guide for the child staffing follows:

A pre-staffing letter will be sent out in advance to inform all project personnel so that all relevant information can be brought together in these meetings. All persons working with each child are expected to be present at each staff meeting when the child is to be discussed.

The results from the staff meeting will be typed up by the project secretary and placed in the child's folder at the project office.

For purposes of follow through, a "child staffing disposition sheet" is filled out in duplicate with one copy going to the staff member who is to follow through with a specific assignment and the carbon copy remaining with the secretary who will check when assignment is completed. (A copy of the child staffing disposition sheet is included under Child Staffing.

The parent advisor will meet with the parents soon after the staffing and relay all relevant information and recommendations appropriate to the parents.

Professional Counseling

The introduction of a new born child into a family situation is often perceived as a welcome guest. It can bring joy and happiness or stress and strain. Whichever this infant child does bring, depends upon the child and his state of health and the psychological readiness and maturity of the parents.

PARENT GROUPS

Group interaction is for two purposes: (1) to instruct or impart information sometimes called task oriented groups, and (2) counseling groups where the main objectives are to facilitate communication in the group in reducing psychological stress, and to share problems and gain new friendship from others who can share in the psychological growth process. Parent groups are structured to accomplish these objectives. In order to accomplish this the following format was designed to be carried out with each group of parents as they are formed. Each presentation is covered by one of the professional staff.

Group Meeting 1	Introduction to the Program, Staff and Communication about Parent Groups
Group Meeting 2	Language Development
Group Meeting 3	Communication Methods for Hearing Impaired
Group Meeting 4	Child Development
Group Meeting 5	The Responsive Environment
Group Meeting 6	Development of the Self Concept
Group Meeting 7	Meet the Deaf Night

Following each meeting a 1½ hour group counseling meeting is held. This group counseling is carried out by the Program's psychologist.

A system to evaluate the effectiveness of the parent group is designed to have the participants evaluate the information received as well as the counseling sessions. The evaluation instruments used in this part of the program are enclosed. They are:

1. Self rating sheet
2. Parent rating scale of workshop presentations
3. Group counseling scale

SELF RATING SHEET

Name of Rater ____

Self Rating: Please rate yourself on the scales listed below. It is not necessary to use each scale; choose those that are most evident to you. Place an X where you were when this program started and an O where you feel you are now.

sensitive to others:__:__:__:__:__:__:__:__:insensitive to others
insightful about self:__:__:__:__:__:__:__:__:lack of insight about self
value self high:__:__:__:__:__:__:__:__:value self low
critical:__:__:__:__:__:__:__:__:supportive
tense:__:__:__:__:__:__:__:__:relaxed
competitive:__:__:__:__:__:__:__:__:cooperative
assertive:__:__:__:__:__:__:__:__:submissive
silent:__:__:__:__:__:__:__:__:talkative
attentive:__:__:__:__:__:__:__:__:aloof
suspicious:__:__:__:__:__:__:__:__:trusting
dependent:__:__:__:__:__:__:__:__:self-sufficient
rigid:__:__:__:__:__:__:__:__:adaptable
accepted:__:__:__:__:__:__:__:__:rejected
harmonizing:__:__:__:__:__:__:__:__:disruptive
confident:__:__:__:__:__:__:__:__:unsure
boastful:__:__:__:__:__:__:__:__:modest
gloomy:__:__:__:__:__:__:__:__:cheerful
easy-going:__:__:__:__:__:__:__:__:quick-tempered
thought-less:__:__:__:__:__:__:__:__:thoughtful
open:__:__:__:__:__:__:__:__:closed
accepting:__:__:__:__:__:__:__:__:rejecting

PARENTS RATING SCALE OF WORKSHOP PRESENTATIONS

Please check those presentations you attended:

Orientation ____
Physiology of Hearing ____
Understanding Hearing Aids ____
Human Growth and Development I ____
Human Growth and Development II ____
The Responsive Environment ____
The Self Image ____
Language Development ____
Communicative Methods for Hearing Impaired ____
Meet the Deaf Night ____

		Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
1.	I feel that all of the meetings attended were helpful.	____	____	____	____	____
2.	I feel that most of the meetings attended were helpful.	____	____	____	____	____
3.	I feel that some of the meetings attended were helpful.	____	____	____	____	____
4.	I feel that none of the meetings attended were helpful.	____	____	____	____	____
5.	I feel the meetings were too frequent.	____	____	____	____	____
6.	I feel the meetings should be scheduled more frequently.	____	____	____	____	____
7.	I would like these meetings scheduled on a different night.	____	____	____	____	____
8.	I understood all of the speakers.	____	____	____	____	____
9.	We feel all parents of hearing impaired should attend meetings like these.	____	____	____	____	____
10.	The facilities were adequate.	____	____	____	____	____

11. Additional Comments:

____

____

SKI*HI GROUP COUNSELING SCALE

Date ______________________ Name ____________________

1. How satisfying did you find the experience of working with this parent group to develop more understanding of the hearing impaired problems. (Circle the appropriate number.)

1 2 3 4 5 6 7 8 9
Completely dissatisfying — Completely satisfying

2. How effective do you feel the group was in helping you understand your own feelings and frustrations.

1 2 3 4 5 6 7 8 9
Completely dissatisfying — Completely satisfying

3. How much did you feel you were a part of this group.

1 2 3 4 5 6 7 8 9
Not at all — Completely

4. How much do you agree with the decision of this group?

1 2 3 4 5 6 7 8 9
Not at all — Completely

5. How interested were you in the group discussions?

1 2 3 4 5 6 7 8 9
Not at all — Completely

6. Were people listening to each other?

1 2 3 4 5 6 7 8 9
Not at all — Completely

7. Were some people dominating the discussion?

Yes_____ No _____

8. Were a few members carrying the group by themselves?

Yes_____ No _____

9. How many people in the group appeared to be (Indicate a percent)

a. Interested ______
b. Bored ______
c, Indifferent ______
d. Involved ______
e. Contributing ______
f. Confused ______

10. Having the group counseling after the presentation each evening was:

1 2 3 4 5 6 7 8 9
Most Helpful Very Confusing

11. Did this group counseling program discuss what you wanted to discuss?

1 2 3 4 5 6 7 8 9
No Yes

12. Did you feel you could express yourself whenever you wanted as it pertained to the topic then being discussed?

1 2 3 4 5 6 7 8 9
No Differently

Comments you have concerning the group meetings would be extremely valuable to us. Please feel free to make any comment you wish to about the group counseling program:

CHILD DEVELOPMENT

Supportive services in the area of child development is provided through an early childhood child development specialist. This supportive service is in addition to the direct child development assistance the parents advisor provide in the home.

The child development specialist conducts inservice training for the parent advisors. Training sessions and workshops are developed around the specific needs of the parent advisors. The child development specialist also conducts child development group meetings for the parents. The topics are usually chosen through a nominative process by the parents.

Where there are specific problems or situations that the parent advisor cannot adequately deal with, the specialist gives special assistance to the family and or the parent advisor.